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TRANSACTIONS

OF THE

HAMPSHIRE

AGRICULTURAL SOCIETY,

1865.

PREPARED BY THE SECRETARY.

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Annals of the Society.

The Sixteenth Annual Cattle Show and Fair of Hampshire Agricultural Society, occurred on their grounds, in Amherst, on the 26th and 27th of Sept. 1865. Since the last publication of the transactions of the Society, the society has been steadily growing in numbers and prosperity, and has gained a strong hold upon the community within which it is located. The expediency of holding its exhibitions within an enclosure, and upon lands of its own is no longer an experiment, but the experience of six years has demonstrated that it is the true way to make the Society popular and prosperous. The great prejudice which in the first year of the adoption of this plan, existed in the minds of some of its members, has been gradually dissipated, and it now receives the hearty support and co-operation of the Farmers and Mechanics of the District. Each successive exhibition has brought out a larger number of contributors, and a better variety of articles for competition. The effect of this is already visible. Farmers are paying more attention to the improvement of their farms. The old established customs of their fathers are being discarded. Experiments brought out by the patient trials of some, are eagerly adopted by others,—and a great improvement in Agriculture is the result. Labor saving implements of farming are rapidly introduced; and very few persons who make farming their business can now be found who do not use the Mowing Machine, the Horse Rake, the Hay Tedder, the Horse Hoe, and the

Corn Planter, and the result is an increased production of crops with a smaller amount of labor.

In the production of Fruit, a marked and visible improvement is seen. It is not many years since the best displays upon our tables came from without the limits of the society. Now our farmers can vie with any portion of the community in this respect. Thousands of choice varieties of Fruit trees have been introduced, with profit and pleasure.

In the stock department of our Show a marked improvement is visible. Choice grades of Sheep have been sought for and introduced by some of our enterprizing farmers, and the result of their experiments has induced many others to imitate their example. Some of the finer varieties of Cattle have also made their appearance among us, and considerable attention is paid to this department.

Although not so largely a manufacturing community as some others, yet in this respect our exhibitions have nothing to be ashamed of. Each year presents some new feature in this respect, and encourages bright hopes of the future.

To the ladies of the Society are we largely indebted for the success of these exhibitions. Their skillfull hands bring forth innumerable articles—of fancy and utility—whilst the "golden product of the milky kine" attests to their skill as housewives. And last but not least their smiling presence adds grace and pleasure to the exhibitions, which we could ill afford to dispense with,—may the day be far distant when this untoward event shall befall us.

The experience of several successive years had fully demonstrated that the days fixed by the legislature for our Annual Exhibition were much two late in the season. Carrying as it did the time nearly into the middle of October, we were apt to have stormy weather,—indeed fair days were rather the exception than the rule. Many of the finer productions were past,—few flowers

withstood the frosts of that period—and the shortened days gave little time for the exhibition. To obviate this difficulty the days for exhibition were last year changed by legal enactment to the latter part of September. Thus far this change has been conducive to our prosperity, and future experience will undoubtedly testify to the wisdom of the act.

The first day of the exhibition opened bright and fair, and the roads were soon crowded with exhibitors, bringing in their productions, Long strings of Cattle, driven by sturdy farmers; Rosy cheeked Matrons with their domestic productions; Youths and Maidens, all wended their way towards the Park, giving ample employment to the Secretary in receiving their contributions. At an early hour the Hall presented an imposing appearance, and although the number of entries in this department was somewhat less than in previous years, yet they made ample recompense in quality for what they lacked in quantity.

The following entries were made:

Town Teams 3; Working Oxen 17; Steers 12 yokes; Cattle for the Stall 6; Bulls 9; Milch Cows 11; Heifers less than 3 years old 3; Calves 4; Swine 11; Sheep 13; Poultry 16; Stallions 5; Colts 18; Farm Horses 13; Roadsters 12; Breeding Mares with Colts 4; Trotters 5; Equestrianism 2; Carriage Horses 34; Miscellaneous Stock—Herds 3; Collections of Fruit 4; Pears 4; Apples 19; Grapes 4; Peaches 2; Quinces 7; Cranberries and Dried Fruits 16; Flowers 10; Seeds Grains and Roots 45; Fine Arts 16; Garden Vegetables 23; Collections of Garden Vegetables 2; Wines, Jellies, Canned Fruit and Pickles 14; Mechanic Arts 22; Bread 18; Butter 8; Cheese 6; Domestic Manufactures 23; Honey 5; Fancy Articles 39,—Total, 487.

In the Floral department, notwithstanding the blighting effect of the long continued drought, a fine display greeted the eye. The specimens presented were of the finer varieties of flowers, and most of them arranged with exquisite skill. It is hoped

that a more favorable season next year will give our ladies greater scope in competition in this department.

The ladies contributed quite largely to the department of Fancy articles, all of which were so meritorious that comparisons would be invidious.

Of Domestic Manufactures there was as large display as usual, demonstrating that the use of the loom, spinning-wheel and knitting needles had not become obsolete.

The display of Fruit was much larger and finer than had been anticipated. The ravages of the Canker Worm, and the scorching drought, had led us to anticipate a meagre show, but we were joyfully disappointed. Two long tables groaned beneath the weight of luscious looking Apples, Pears, Peaches, Quinces and Grapes. To the cultivation of the latter fruit, our farmers are now paying considerable attention. One contributor alone, contributed fifteen varieties. It bids fair to become a source of profit.

Of Garden vegetables a fine display was made,—better than in any former years. Within a few years our farmers have been turning their attention to this branch of agriculture, and this region of the Connecticut valley sends annually to the city markets vast quantities of vegetables, which yield a remunerative compensation to the producer.

The Fine Arts were well represented by artists of acknowledged merit, and amateurs of considerable skill.

Out of doors the show of Stock was creditable to the Society. Working oxen fit for the shambles, Cows, Heifers, Calves and Steers, made up an imposing collection of Stock. The choicer breeds of Swine were also well represented by a score of competitors.

The Poultry department also presented quite an attractive appearance, many choice breeds of fowls being represented.

The forenoon was devoted to examinations by the Committees, and also by the numerous spectators. At 2 o'clock a goodly number repaired to the Hall to listen to an address by Professor Chadbourne of Williams College. His theme was "*Agriculture as an Employment; Its Dignity and Requirements.*" It is unnecessary to say that it was full of thoughts instructive, and it is much to be regretted that we are unable to publish it in our transactions. By a formal vote of the Society, a copy was requested for publication, but for reasons satisfactory the request was declined.

A new feature was this year introduced on the first day. Heretofore the trials of speed have been restricted to the last hour of the second day; but this year a match for a purse was made between two Stallions owned respectively by Charles Mosier of Deerfield, and Julius Shepard of Greenfield, which added much to the entertainment of the day.

A match game of Base Ball was also played between the Hampshire Base Ball Club of Northampton, and the Nicæan Nine of Amherst College. This interesting game absorbed the attention of the spectators, until the dusky shades of evening warned them of the close of the exhibition for this day.

The second day of the Show opened in unclouded splendor, and the spacious grounds of the Society were soon crowded with pedestrians. This day is more particularly devoted to the exhibition of Horses, and the entries were more numerous than ever before.

At ten o'clock a grand cavalcade was formed extending nearly around the half mile track, which under the Marshalship of Sheriff H. A. Longley, and preceded by the Belchertown Brass Band, made several circuits of the grounds. After this the examinations of Committees occupied the time until one o'clock, when a half hour was devoted to feats of equestrianism, in which two ladies appeared as competitors and won enthusiastic plaudits from the crowd.

At half past one, such as wished repaired to the Hall where dinner was prepared by Mr. J. B. Wood of the American House, to which ample justice was done.

At its close came the "feast of reason," which was opened by the President, Hon. Levi Stockbridge, who in brief recounted the progress of the Society and the results already attained.

Hon. Henry F. French, president of the Agricultural College, recently located in Amherst, was introduced to the audience, and gave them some practical advice on the subject of Agriculture as applied to this region. Prof. Julius H. Seelye of Amherst College also made a few brief and happy remarks, illustrating the connection between the educated and laboring community.

Hon. Chas. G. Davis, Delegate from the State Board of Agriculture to this exhibition, made some brief remarks, and tendered some advice respecting the future management of the Society, which favorably impressed many of his hearers. This closed the exercises at the table, and the audience adjourned to the grounds where trials of speed occupied the remaining hours of the day, concluding the most successful exhibition of the Society.

REPORTS.

Report on Flowers.

SECTION I.

The Love of the Beautiful, God Given and Heaven Born.

Our Creator formed the earth in beauty and symmetry. He spanned above it the jewelled sky, ever revealing, ever flashing forth, new splendor and charms. Then he made man endowed with immortality, with a capacity for beholding, enjoying and cherishing all the beauty which is mingled in His works. Had He designed man merely to cultivate the useful, apart from the beautiful, an Eden would never have been provided as the abode of our first Parents. The great Architect of the world is no waster, therefore, the profuse adornment which crowns His works; the mystic charm of Nature is designed for man's attention. There is an innate power of loving the beautiful, in a greater or less degree, within the heart of all persons living. Indeed, this power is an instinct of the human soul. It is God-given and Heaven-born. It is the greatest, and most rational source of human enjoyment. Whatever in Nature serves to enhance,—to bring out this faculty, should be sought after, and regarded with care.

I know of no objects better adapted to this end, than the bright, delicate flowers. We find them everywhere. They

spring up all over the surface of the earth, as rife as the stars in the heavens. Man feels a glowing love within his heart for the beauty which resides so supremely in the bud and blossom, which is extinguished only with life. Even the babe, a mere human blossom of itself, will notice a flower and reach forth its dimpled hand to eagerly clasp the waxen stem.

Since flowers are symbols of God's love, even used by the blessed Jesus as an illustration of His teachings unto the Jews, let us awaken within our souls, a tenderness, a parental care, and an ardent love for them; until the homes of New England are made attractive, by their introduction into every garden, yea, until each window sill shall possess a beauty-giving,—a soul-refining treasure, in the form of some fragrant exotic,—performing a mission of love upon each beholder.

SECTION II.

Remarks on Flowers and their Cultivation.

It is not sufficient that we possess an eye for the beautiful, but we should aim to create and cultivate the beautiful.

Whoever is engaged in decorating his or her home, according as means will allow, with artistic taste, may be justly termed a benefactor to mankind. It requires industry, skill, perseverance and taste to cultivate flowers. Flowers are as worthy of attention and cultivation, as are the grasses, grains and vegetables in agriculture. Their careful cultivation often results in profit and pleasure, as does the efforts, labor and scientific knowledge of Chemistry when applied to the farm. For instance, how often do we see some Floral dealer realizing more profit from a quarter of an acre of ground that has been planted and sowed with choice flowers, than as though it had been planted with common grain, and at the same time he gives pleasure to all who pass his grounds and observe his flower-beds.

But, it is not every man that can plan and cultivate even a garden with real success and skill. It seems as if nature had designed some men for the culture of her works, and that we have born-gardeners, as well as born-poets. One is as worthy of approbation as the other, if we would have the resources of artistical taste complete. The Poet gratifies us with the utterance of an original idea of beauty; while the Florist, who produces a new kind of the same species, by re-planting and culture, satisfies a refined taste, and surprises us by his experiment.

"Epicurus first gave the idea of a Flower-garden attached to dwellings, to the Athenians, about two hundred and sixty years before the birth of Christ. Plautus assigned the custody of gardens to Venus; and Pliny observed that the labors of the garden formed one of the occupations of females in his time; and that it was a common observation in those days, when a garden was out of order, and not well-kept, that the mistress was a bad housewife." But according to our own observation, of the interest manifested by the two sexes, in the keeping up of a good garden at the present day, we believe that Pliny's opinion could be easily refuted. It is too often the case among our best Farmers, that *they neglect their gardens;* while the overtaxed house-wife struggles to have it well-tended, and feels the want of its products to make up relishable dishes for her table.

Horticultural pursuits were deemed so honorable amongst the Romans, that many of their distinguished families derived their surnames from some species of fruit or vegetable, which they were celebrated for cultivating.

If our ladies, who cultivate flowers at the present day do not succeed in handing down surnames to future generations, they may, if they will, have their tastes improved,—their ideas of true beauty enlarged, yea, even their *tempers improved*, by mingling much with the soft-hued, fragrant pansies, the pleasure-giving mignonette, the waxen, modest lilly, and the clumpy Pinks,

which are ever emblematical to me of domestic contentment, and perchance, the culture of flowers may so influence their characters, that they may hand down to future generations, powers of mind which shall make a name known throughout the whole world.

Though we might speak of the gay gardens of Babylon, and of those miniature Edens, as it were, of the Eastern nations, we must hasten to refer to the practical part of a Flower-garden.

When we have chosen our ground for flowers, we should first lay it out in tasteful beds of various forms and sizes. The earth should be finely pulverized, and richly manured. In the choice of our plants, we should ever take into consideration the *extent of our grounds;* for large plants in small gardens are inappropriate. Elegance should ever be associated with neatness. It should be a rule with a Florist not to imitate the style of larger gardens, on limited ground, by introducing the serpentine windings of larger plantations; while large grounds should not be cut up with diamond-shaped beds; but rather imitate nature more. The bolder flowers should be half obscured by shrubs. The smaller flowers should occupy the sloping sides of banks, because they are brought nearer the eye, and they will generally be found growing naturally in such situations.

Attention should be shown to the succession of the flowering of plants. Those plants that flower in the spring; such as the early and hardy kinds of narcissus, anemones, snow-drops, crocuses, double daisies, &c., should be planted in considerable quantities in one spot, so as to make a striking appearance. Care should be taken to contrast the colors as much as possible in a flower bed.

The China-Aster is an exquisite flower and deserves an extensive cultivation. According to "Nutall" upwards of sixty species belong to this genus. This flower blossoms so late in the fall that we should scatter them profusely among other flowers.

Some Asters have florets entirely quilled. The seed which comes from the Aster, should be taken from the centre, or principal stem only, as the flowers on the lateral branches are never so large or double, and consequently produce inferior plants. This seed should be sown in the Spring, on a warm border or a gentle hot-bed, and when the plants are three inches high they should be transplanted, and kept shaded from the sun, and properly watered till they have rooted.

The Immortelles, are a beautiful species of flower. They can be preserved in bouquets of dried flowers. To meet with success in their culture, care should be used in careful preservation of flower-seeds from year to year. All flower-beds must be kept free from weeds.

The Holly-hock is sometimes overlooked, as being too common. We admire this flower in the garden. But they should be planted so as to stand together, so as to form little groves in some retired corner, or even before kitchen windows, and we should aim to have a great variety of colors and kinds.

Dahlias are worthy of much attention. They are gorgeous, and of great variety, and form a charming adornment, for large plants. They are raised from bulbs, which, in the Fall, should be carefully housed in a dry place, and be kept from freezing. Each plant requires but one bulb. New species can be procured from the seeds, which are found among the petals. Dahlias need to have their bulbs changed, something like the potato, to retain their beauty from year to year. They flourish well beneath a slight shade, but need rich soil. The Dahlia was formerly a South American plant, and introduced into Europe by the Spaniards in 1786.

Then there are the Verbenas, the purple and white Candy Tuft —the Larkspur, The Perrennial Phlox,—the Mourning Bride,—London Pride,—the Bell Flower,—all worthy of cultivation.

A noted Gardener recently informed me that if the ladies let their Verbenas grow up with "*less clipping*," that the flowers would be more gorgeous and of better size.

There are certain ingredients which may be mixed with compost, which if applied to different flowers, will deepen their color, and add to their beauty. For instance, charcoal dust applied to the roots of the yellow rose, or blush rose, their shade will become deeper. Old night-soil, or Sugar baker's scum, if finely sifted and thrown over the Pink beds in Spring, will make the blossoms of a richer color and larger. Pinks should be allowed to remain not over two or three years, without change of soil, or situation. When Pink roots become old and woody, it is well to take them up and divide them into slips.

Violets of all species, require a light soil, and thrive well if a little shaded. A mixture of chalk with earth will make a good dressing for them. "The seeds of the Pansy may be sowed at any time. The ripening of the seed always injures the plant, which can be prevented by cutting off the branches when the beauty of the blossom is past. They will then send out fresh branches, and continue to bloom during the year, Transplanting adds to the beauty of all the Violet species."

Since the violet is an emblem of modesty, we naturally associate with it the Lilly, the emblem of beauty and purity. Especially is the white Lilly worthy of culture. It is easy to cultivate, and will thrive in almost any soil or situation. It readily increases by offsets, from the parent bulb. The offsets should be removed from the old bulb every third year, and August is the proper season for transplanting them. They should be covered with about five inches of earth, but on no account removed in the Spring of the year, as this is found to check their flowering for several years. It is well to mix Lillies with clumps of roses, the effect being agreeable to the eye. Their fragrance and beau-

ty claims for them a place in every garden. "Phillips says that the White Lilly is indisputably a native of the Holy Land."

We find, from transplanting, and cultivation, that many of our wild flowers increase in size and beauty. For instance, the Rannunculus or butter cup, the Spoonwood, and the Honeysuckle, and are often found on the grounds of the wealthy aristocrat.

But lastly, we would speak of the Rose, yet it is far from being the least among flowers. Indeed, the Rose is the queen of flowers. There are many varieties of Roses, estimated to be nearly a thousand different species. "It is a flower that has been known from time immemorial, so that it is impossible to discover its native country. The word is derived from the Greek, *rodon*, red; from whence comes Rosa, Latin, and Rose, English." There are every kind of shade among their color, as even a blue, and a black rose have been produced by our Florists. Some are climbing, and prove highly ornamental to all kinds of trellis work. Climbing roses rarely send up new sprouts, and if a sprout is wished for, it is well to bend a branch over, and cover the end of it with earth, and after it is rooted, to cut it from the parent stem, and transplant it. The "Persian Rose" grows thirty feet high; "Lady Banks" twenty feet, and the common Day rose twelve feet high.

Roses were awarded as prizes for eloquence by Clemence Isaure, who instituted the Floral games. It was formerly a custom to place a Rose over the dining table, or at the doors of temples, or any place where secrecy was intended. If the suspension of a rose would be received as a symbol of secrecy, it would be well to hang one over the door, when the Cabinet at Washington convened to discuss war measures,—and in the midst of every domestic circle, where family jargons exist, to prevent babbling gossip. The golden Rose was the seal of Luther, and it used to be consecrated by the Popes on Good Friday, and presented to

some crowned head, none other being deemed worthy of it. Roses need pruning, and should have the earth about their roots carefully pulverized, and *often enriched* by chip-dust and compost, which for neatness sake, should be well covered with clean earth. The grass must be kept away from the base of the main stem. But a dressing of Horse-manure has been known to kill many choice roses, and breeds insects on them. To inject a wash made from the chips of Quassia, is effective in destroying insects. If Rose bushes are fastened to a stake, or afforded some support, they flourish more abundantly. Soap-suds is good for them. Yellow Roses need dividing once in two or three years. The Monthly Roses will thrive in the open air, and do well if planted against a wall. The usual mode of propagating Roses is by slips, or layers. The Dutch are said to be successful in budding roses, thus producing a rose-tree covered with various, and differently colored species. Indeed, we have seen such trees and they are of rare beauty. Moss Roses should be more common among the ladies, by careful culture and right protection given them.

"The Roman Emperors used to allow their famous generals to add a rose to the quarterings of their shields, some of which may be seen to this day in the armorial bearings of many of the noble families of Europe." We believe that many of the noble generals of our own loved country are worthy of the shower of roses that the ladies ever and anon bestow upon them as they pass through the country in their travels. Especially will America ever be proud of her Grant, Lyon, Sherman, Burnside and Banks; while many of her brave patriots fallen in Liberty's cause, acting the part of an uncomplaining Private, will be to the country adornments, like the fragrant roses to the wilderness and verdant plain.

We can hardly say too much in the praise of the culture of the Rose-bush. Their very fragrance makes us good natured with ourselves, and all the world, and the loaded rose-bush by the

humblest cottage, awakens emotions that the golden Palace fails to do.

How many a poor soldier upon his narrow couch in the Hospital, or in the foul prisons of the South, who dreamed of soft summer days, when he was wont to sit upon the door-sill of his Mother's cottage, among the hills,—while he looked lovingly upon the white roses, that nodded to him in the soft, zephyr, or of the home spare bedroom, beneath the windows of which, were grouped the red and white roses that perfumed his room, while his dear Mother nursed him when ill, he thought of a time, when again he should be at that home among the roses;—but, alas! they were transferred to a home in the celestial city,—rather than to a Mother's care, and not even a rose was laid upon their marble brows to speak of loving hands and hearts.

It is estimated that more than 100,000 species of plants have become known, and since there is such a vast number, it affords a wide field for abundant research for the Horticulturist.

SECTION III.

The Utility of Flowers.

Heretofore, we have spoken of the Beauty of Flowers, and we find them possessing Utility also. They possess great medicinal properties, either in their blossoms or roots. The leaves of roses, are an astringent. The fresh plants of violets, form a useful mucilaginous purgative. Poppies, afford an anodyne. It is said that a syrup of the juice of the tiny flower, of the Forget-me-not, is a remedy against consumptive coughs.

The seed of the Sun-flower is used to fatten poultry. Bees, and many kinds of insects feed upon the nectar of flowers. The flowers of the Arnica, Chamomile, and Lavender are used extensively by Physicians.

The decorative parts of architecture, were originally derived from flowers and plants.

One writer upon Floral Architecture, states, that "Hiram ornamented the capitals of the celebrated pillars he wrought for Solomon with lillies and pomegranates; and the Corinthian capital is stated to have been first invented by Callimachus, a famous architect, who, being engaged to make more pillars at Corinth, took the form of his enrichment from passing a basket, covered with a large tile, that had been placed on the ground over a root of acanthus, the stalks and leaves of which had burst forth, and spreading themselves on the outside of the basket, were bent back again at the top by the corners of the tile, and its beauty so delighted Callimachus, and yet was so novel, that he adopted the form of the basket surrounded with the acanthus as a capital for his pillars;"—thus, originated the Corinthian style of architecture. The Gothic style of architecture was derived from the bud or germ, the Grecian, from the leaf, and the Indian style from the flower. Designs for printing, or stamping all kinds of fabrics, are often taken from a flower, vine, or a bouquet. Paper-hangings often present an imitation of flowers. Painters, copy from Natures floral department. The most exquisite perfumery is made from flowers. One hundred pounds of the petals of roses affords scarcely half an ounce of oil. This oil forms what is called "Otto of roses," and an ounce costs enormously. If you rub one drop of this oil with one tea-spoonful of fine sugar into a pint of water, gradually stirring it all the time, you can make a superior article of rose-water.

A choice perfumery is now made of the roots of lillies. Flowers are useful to decorate the sick room, and they cheer the patient. We once were the recipient of a floral gift, from a kind hearted Physician, and we could almost shed grateful tears over the bouquet, and with "Keats," could exclaim "a thing of beauty is a joy forever."

The best qualities of forage often exist in the flower of the grasses. For instance, clover should be gathered ere the blossom becomes too mature, or the forage is injured. Flowers are the harbingers of fruitage. The blossom must precede the kernel, or we have no grain. Thus, we find flowers useful as well as beautiful.

SECTION IV.

Preservation of Flowers and Leaves.

There are many ways of preserving flowers and leaves in a dried state, so as to retain much of their pristine beauty. When the cold snows of Winter are on the ground, they are beautiful to the eye.

An Herbarium of dried and pressed flowers should be made by our youth in schools, and the study of Botany more generally pursued.

Flowers for the Herbarium should be gathered when in full bloom, and pressed until quite dry between clean white paper. A year's file of any of our Newspapers will afford the best possible apparatus for drying them. After the specimens of flowers are placed between the sheets of paper, lay a board on the top, and beneath them, then, place a heavy weight upon them. They will dry in a few days, according to their juiciness. Some may need pressing for two weeks or more. When dried, transfer them carefully to the leaves of a blank book of white paper, prepared for them. Some transfix them with glue, or by passing their stems through loops cut in the leaves of the herbarium. The nicest way of retaining them in place, is, by carefully sewing them in. Beneath each plant, write its common name, artificial class and order, generic, and specific distinction, and natural order; the place where it is found, and season of year in which it flowers. To guard an Herbarium against insects, and moisture,

wash the whole over with a weak solution of corrosive sublimate, care being used, as it is a deadly poison,—but good as a wash.

Grasses may be tastefully arranged with Immortelles, and wild red berries, and nicely preserved.

The leaves of Autumn, with their gorgeous tints may be pressed, and preserved for years. After drying, and pressing them, their upper surface should be delicately varnished, with white varnish; then re-dried. They can be arranged in the form of a Harp, or a Cross, on nice card-board, and framed, and they make the Library, or family Sitting-room look cheerful in the light of a glowing fire in Winter time. The gatherer of Autumnal leaves should commence collecting them, when they begin first to change from green, into bright colors, to make a fine assortment.

It is a peculiar charm of our American forests that they deck themselves in their gay, autumnal livery, to delight us with their mosaic appearance. It was formerly supposed that frost changed our leaves into crimson and yellow hues. It is now the opinion of scientific men, that the leaves of our trees are changed and fall as the ripened fruit of the tree. In England they have nothing but the russet brown upon their forests, and can scarcely believe our Autumnal scenery to be as gorgeous as American artists represent it to be. When Dr. Hitchcock of Amherst College was in England, he exhibited sketches of our Autumal scenery. His English friends expressed astonishment, because the artist had put so many colors upon his trees, while they deemed it impossible that they were actually so. When Dr. Hitchcock told them "no painter could imitate the many and gorgeous tints of our Autumnal scenery," they were doubly astonished.

At one of the Royal evening parties at France, a lady appeared with a sash and headdress formed of well preserved and brilliant Autumnal leaves from America, and they created universal admiration. Nature is prolific in beauty, and when we can transfer her charms to our houses by a careful preservation of it, it is

pleasure to ourselves and others. It is best that we teach the rising generation to observe, love and fathom Nuture's mysteries, and their minds will become purified, refined and elevated.

STATISTICAL REPORT.

At the Hampshire Agricultural Society in 1862, there were 17 entries of flowers and wild flowers. The collection was good in consideration of the lateness of the season. We were fortunate enough to secure ladies possessed of a high appreciation of the beautiful and of a thorough knowledge of flowers, and capable of judging justly of the merits of specimens offered for inspection,—who made up a full committee. A *full* committee is ever desirable at our Fairs, in *all* departments. Members appointed on Committee's ought to feel a responsibility in meeting their appointments *punctually* if possible for them.

It was a matter of discussion as to which collection deservedly stood first in point of beautiful arrangement. In consideration of the largest collection, the first premium was awarded to No's. 8 and 12, which was furnished by Mrs. S. W. Boutwell, of Leverett. She stated that she had raised 70 different varieties of one species of flower represented in her bouquet, and had 7 varieties of Coxcomb in her larger bouquet. We would take the liberty to suggest it to be objectionable to have seperate bouquets offered with the intention of having them considered as one "Entree." They should be entered singly. It should be a law like that of the Medes and Persians, that not one of the Committee should know to whom they are awarding premiums, and then let those who receive premiums be satisfied. The second premium was awarded to Dr. Bonney, of Hadley, for a Floral Harp. It was exquisitely arranged, and exhibited rare taste, and the premium awarded him was considered equal in value to the first

premium. The third premium was awarded to the pyramid of flowers with a ground-work of Verbenas. There was one exquisite collection of Verbenas that did not arrive in season for an entree, therefore did not take the premium it deserved. In years to come, we hope *all the ladies* will endeavor to compete with each other and to bring flowers to our Agricultural Fairs.

HARRIET C. RICE,
Ch. Com. on Flowers, 1862.

Report on Fruits.

APPLES AND APPLE-TREES.

Apple-trees and apples is the subject of this report. A farm without an apple-orchard, is a sad spectacle. The farm is quite as imperfect as our national flag without the stars. The farmer who has, and wishes no orchard, lacks both taste and economy. Taste,—because an apple-orchard is a "thing of beauty." Economy,—because raising apples is a source of decided profit. What more beautiful scene than an apple-orchard in full bloom, in the freshness and glory of Spring-time? The trees themselves, elegant in conformation, and clad in their simple, leafy verdure, are ornaments. But when crowned in the blooming-time with millions of blossoms, pink and white, and laden with sweet perfume, they remind us of the "Elysian Fields."

Apples are a pallatable and healthful article of food. Eaten without preparation, they are a luxury. And the choice dishes, such as sauces, preserves, tarts and various kinds of pastry that can be made from them, are manifold. As an article for the market that always meets with a ready sale, apples have no rivals. An orchard standing on a single acre of ground, will afford more profit than can be obtained from the acre in any other way. I will show this hereafter.

BRIEF HISTORY OF THE APPLE-TREE.

The apple-tree has a very remote origin. According to an ancient tradition, Adam was choked with an apple tendered him

by the fair hand of Eve. Said accident caused a remarkable protuberance on the anterior part of his throat. This peculiarity has been transmitted, and inherited by all the sons and daughters of the original proprietors of Eden. The Old Anatomists made use of this curious tradition, and named the prominence in question, "*Pomum Adami*," or Adam's apple, and it bears that name to the present day.

Skeptics will probably doubt the above narration, but they will credit those ancient Greek and Roman naturalists who described the apple-tree and its fruit with great accuracy. Theophostus, Heroditus, and Columella, all make mention of the Apple-tree. Pliny says, that the Greeks called them "Medica" from the country where they first originated. Pliny described them as a fruit with a delicate, tender skin, easily pared off. He says of the crab-apples, or "wildings," that they are small and sharply sour, for which peculiarity they receive many curses. Columella, a practical husbandman who lived and wrote long before Pliny's time, not only describes the apple-tree but also the process of grafting, and gives several different methods, which he says, were handed down from the "Olden time."

Apple-trees were brought to this country very early. In 1629, by the order of the "Governor and company of Massachusetts bay," in New England, apple seeds were brought from England into the colonies; and Governor's island was granted to Governor Winthrop in 1632 on condition that he should plant a vineyard, and an orchard. The pilgrims also cultivated orchards, near Plymouth Rock, soon after their arrival. Many of our best varieties of apples originated here among us. The Baldwin originated in Wilmington, near Boston, more than one hundred years ago, and for a long time was called the "Butter apple," or the "Woodpecker apple." Rev. Wm. Blackstone planted the first orchard in Rhode Island, in 1836. In this orchard originated the "Yellow Sweeting." The Newtown Pippin came from a seed-

ling originating on Long Island more than 150 years ago. But a long history of Apple-trees is not needed here.

THE PROFITS OF RAISING APPLES.

Apples are profitable for food, prepared in a great variety of ways. They are profitable as an article for the market. The farmer can raise no other crop, (every thing considered) with so large a margin of profits. Let us see if this be true, or not.— An orchard containing fifty trees, properly set out, will cover an acre of ground. In ordinary seasons, each tree ought to yield three barrels of fruit. The whole orchard will produce then, one hundred and fifty barrels of apples, annually. These are worth, on the spot in common seasons, one hundred and fifty dollars.— An acre of grass-land will produce about three tons of hay, commonly worth, not more than thirty dollars at the time of carting. The apples can be gathered with as little expense as making the hay. This will leave a large balance in favor of the orchard. Aside from this, the orchard will produce in addition to the apples, a fair crop of either grass, potatoes or oats, without detriment to the tree. I might take the corn, or wheat crop, or any other; not excepting tobacco, and make the same comparison and yet the balance, (other things being equal) would still be in favor of apples. An orchard of forty Baldwin Apple-trees has yielded three hundred barrels of fruit in a single season. A farmer in Leverett, two years ago, gathered one hundred and one barrels of Seedling apples, from a single tree. Another sold two hundred and fifty dollars worth in a single season, gathered from an old orchard, covering one, and one half acres of ground. But these facts are sufficient to establish the great profits of raising the fruit under consideration.

SITUATION AND SOIL, MOST SUITABLE FOR AN ORCHARD.

A side hill, or a gentle slope, facing the South or Southwest, and sheltered in the back-ground by a higher eminence, is a good situation for an orchard.

Avoid low, flat, or over-moist grounds with clayey subsoil, also sandy plain lands.

Orchards will not flourish in such situations, nor on such soils. Dark, rich loam, intermingled with gravel, with subsoil of yellow loam, intermingled with gravel, is the most proper soil for an orchard. A soil that naturally produces the oak and sugar maple, will produce a thrifty orchard. Avoid lands and locations that bear the pine or hemlock,—they will not grow an orchard.

HOW, AND WHEN TO PLANT AN ORCHARD.

The best time to set out an orchard of young trees, is in the Spring. Let it be done early—as soon as the frosts are well out of the ground. Go to the nursery and select your trees. Be careful to get thrifty, well formed ones of such varieties as you desire. Those of a larger size are the best. Never select any less than six, or eight feet high. They are more apt to live, and you will get an orchard sooner by so doing. Secure as many roots on the young trees as possible, and be careful not to wound or bruise them in taking them from the ground. The holes should be dug in well marked rows at intervals, of thirty or thirty-two feet apart. This is quite near enough for the good of both trees and land. Spade out a hole twelve inches deep, and five feet or more in diameter. Cover the bottom of the hole with some well-made, rich compost, to the depth of three or four inches. Now set the tree carefully in, straightening out all the small roots and fibers, and draw in the fine dirt upon them.—After all the dirt is drawn in, place over the whole the grassy

turf, if on sword land, with the grass side down, and if deemed necessary, secure the tree to a stake by a piece of soft cord, or strip of cloth, and the thing is done.

THE AFTER TREATMENT OF THE YOUNG TREES.

Do not meddle with them much the first year. If the season is a dry one, they may need watering, but they will require no pruning. Young trees will bear but little pruning for a few years. They need all their foliage to gather from the atmosphere important principles of growth. After the first year, a compost, composed of well rotted manure and wood ashes should be applied annually around and near them. It is an excellent plan to wash the bodies and larger limbs at least once every season with a solution of Sal-soda or soft soap and water. This will keep off parasitic growths, and destroy insects and worms. Examine them often near the ground, for the detection of that enemy of Apple-trees—the borer. If you find the bark penetrated by this worm, seek for it with a piece of bent annealed wire, and destroy it.—Clear the leaves and twigs from worms and catepillars as soon as you discover any. If any pruning is done, do it with a sharp knife, or fine toothed saw, and cover the stub with a coating of grafting wax, or cement.

If the land can well be cultivated, it is better for the young trees. Potatoes, corn or oats, will flourish well in an orchard, and give a fair crop without injuring or impairing the growth of the trees. Be careful in ploughing or cultivating, not to wound the roots, or bark, or in any way to disturb them. If the land is kept down to grass, a surface of several feet should be kept clear of turf, near the body of every tree. This can easily be done with a bog-hoe or pointed shovel. Or, what is quite as effective, the same space can be covered with mould.

HOW TO RECRUIT AN OLD ORCHARD.

Many farmers have on their premises, old orchards, producing very little fruit. It is desirable to make them bear, until a young orchard can be brought forward into a bearing condition. Can anything be done to reinvigorate the old and barren trees, and to enhance their productive powers? I answer yes, and from personal experience with an old, worn out orchard. My method, and one which proved successful, was the following. First, the trees were cleared of all dead and decaying limbs, with the saw. Then all the moss, and old dead bark was well scraped from trunk and limbs, with a sharp hoe. A quantity of turf for a space of six feet in circumferance was removed with the spade, from around the trunk, and one bushel of compost applied. The compost was composed of equal parts of ashes, charcoal dust and well made manure. Then the turf was replaced, the grass side downward. On the following year, the leaves were larger and darker green, and for a number of years the quantity and quality of the fruit was doubled.

WHAT VARIETIES OF FRUIT TO RAISE.

Any person about to plant an orchard, will do well before doing so, to answer the following question. What trees will flourish best in this latitude, and on the peculiar soil of my farm?—What varieties of apples will suit best the tastes of my family for home consumption? What kind of apples will find the most ready sale in market? What varieties are the best bearers?—Supposing you wish to set out an orchard of one hundred trees. Seventy-five of these at least, should be calculated to produce market fruit. The remaining twenty-five, may consist of selected varieties of Summer, Fall and Winter fruit, adapted to the tastes and predilections of the family. Those designed for market,

should not reach over four varieties, and those all winter fruit.— If I were to name the kinds, all things considered, as being most economical and desirable, they should be the following: Rhode Island Greening, Roxbury Russet, Baldwin and the Newton Pippin. These varieties are excellent bearers, and the fruit always meets with a ready sale.

HINTS ABOUT GATHERING AND STORING WINTER FRUIT.

Apples should never be shaken off from the trees. They will become bruised and decay much the sooner. They ought to be carefully plucked off with the hand, one by one, and placed in a basket. From the basket they should be transferred to a shallow box, not over ten inches deep, in the same careful manner. Now let them stand in an out-house or open shed, until very late in the Autumn. So long as they will not freeze, keep them in this condition. Then in time remove the boxes, after taking out all decayed and decaying fruit into a dry, cool cellar. Elevate the boxes on pieces of timber, a little way from the cellar bottom.— Apples after being gathered, should be stired as little as possible. They never should be poured into a box or barrel, for this will bruise them. A shallow box is preferable to a barrel, as there is less pressure from above downward. And besides, the apples will keep cooler, and the decayed and decaying ones, can be more easily removed.

THE APPLE AS AN ARTICLE FOR FOOD, IN ITS RAW AND COOKED STATE

Apples eaten in their natural condition, are a palatable, and healthful article of diet. They contain no inconsiderable amount of the nutritious principle, and they are easily and quickly digested, and promote the growth and the health of the body.—

Baked or roasted, they are excellent as a dessert or eaten with milk and bread. Fried with butter or lard, or stewed with white sugar, they make a fine relish, eaten with fresh or salted meats. With cider molasses, they when stewed, make the old fashioned "Apple Sauce," the favorite dish of our ancestors, a hundred years ago. And the article when properly made, is just as good now, as ever. Apple pies, tarts, jellies, &c., form no mean part of the delicacies of every well ordered pantry. The dried fruit, finds a variety of uses in the hands of the skilful house-wife, in the preparation of numerous delicious dishes when the raw fruit cannot be obtained.

APPLE CIDER OR WINE.

Every latitude produces those fruits and acids, conducive to the health of the inhabitants. In Tropical regions, when great heat prevails, very acidulous fruits are required, and they have the lime and the lemon. In the Frigid Zone where intense cold prevails, few acids are required, for the inhabitants need none.—They drink the Oils and eat the fatty flesh of the Whale, Walrus. and Seal, and grow rotund and obese, and so are proteced from freezing. In these "*Temperate regions*" we seem to need not too much fatty food, nor too acidulated fruits or drinks. So we have the Grape, Cranberry, Currant and Apple, moderately acidulous in their character. Apple cider, the fermented juice of the apple, when properly prepared, is not only a grateful and healthful acidulous beverage, taken at proper times and in proper quantities, but it takes the place of imported wines and brandies, in the cure of many ailments, incident to the human system, and peculiar in these latitudes.

In cases of indigestion, from a lack of a proper secretion of the gastric juice; it gives tone and vigor to the stomach, and helps to restore its normal functions. In the latter stages of typhoid and

bilious fevers, it is quite as useful as most foreign wines or brandies, and very much more so, than the vile preparations palmed off upon the public, purporting to be the genuine, imported articles. The sweet cider, boiled down to a syrup, enters into the composition of many delicious articles of food. Brandy, distilled from the fermented wine is pure spirit, and useful for bathing purposes, and when old, is not much inferior in a medicinal character, to brandy distilled from grape wine. Good cider cannot be made from inferior or decayed, or worm eaten fruit.—The apples should be ripe and mellow before they are ground out in the mill. They should be mixed, the sour and the sweet, in about equal proportions when carried to the apple heap. After the fruit is ground in the mill, the pomace should stand in the vat a day or two, being frequently stirred with a wooden shovel. Being thus brought into contact with the air, the cider will have a fine, rich color, and a better flavor, acquired by the digestion of the apple skins which contain a fragrant oil; and by chemical changes wrought in the cider proper, by atmospheric influence. The cider should be stored in well cleansed barrels or casks, and put into a dry, cool cellar. After fermentation has quite ceased, the barrels or casks should be hermetically closed. No foreign substance should ever be added to cider, with the idea that it can be improved or made better thereby. Those who wish to poison their cider by chemicals, will bear in mind that when they do so, their cider becomes a *medicinal tincture* unfit for a beverage, or to use in any way unless prescribed by a Physician. Cider will keep fit for use much longer if bottled, soon after the vinous fermentation has ceased.

DAVID RICE, CHAIRMAN.

Report on Fancy Articles.

This department the present year, also included that of the fine arts. There is no portion of the exhibition so well calculated to please, and to attract the attention of those interested, as the one under consideration. It is in fact the ornamental part of the show, and the one that most pleases the eye and charms the heart of the beholder. Without it, the hall would be comparatively unattractive and common place in its general appearance. With the addition of the very fine and gaudy department of "Flora," the specimens of the Fine Arts and Fancy Articles, make one of the principal attractive features of our Agricultural Hall, and do much for the credit of our Annual Exhibition.

THE FINE ARTS.

The cultivation of a taste for the Fine Arts in our households, should be encouraged. Hardly a family exists among us, but what one or more of its members has more or less natural talent in this direction. A cultivation and practice of the arts of painting and drawing, is not only a source of recreation and amusement, but affords many clever specimens abundantly fit to ornament the parlor, and the drawing-room, where the more elaborate and costly articles, could not well be afforded. It is not expected that our agricultural community can deck their

abodes with costly paintings from the hands of the "Old Masters." It would be far beyond their wishes or their means. The more simple productions from the Easels of their own families,—home productions of the genius of their darling sons and daughters, will do equally as well, and be to them, far more precious. A culture of this taste, not only enlarges and strengthens the imagination, but refines and beautifies the mind, and gives to the budding intellect, a proper and a healthy turn. Besides this, painting and drawing are among the educational accomplishments highly to be desired, in the polite attainments of our sons and daughters. Our sons, who learn to handle the pencil, and crayon with skill, in the future, may be able to execute the architectural designs for their own dwellings, and to use their acquired art in many useful and satisfactory ways. And our daughters, may finish in oil and water colors, many beautiful landscape scenes, from still life, of views in the vicinity of their "*old homes*," that in after years, when perhaps far away from the "dear old home," will be to their sweet remembrances, of the places where they spent the period of their young lives. We would respectfully suggest to future Committees, the propriety of offering handsome premiums for original specimens of architectural designs, and also, of landscape views, in oil and water colors, of scenery in our own immediate vicinity, than which no other spot on earth, offers a more beautiful field for the eye and labors of the ambitious and tasteful artist. Holyoke, and its surroundings,—the villages of Amherst, Hadley, Hatfield and Sunderland; with green and luxuriant meadows on every side, and the valley of "Old Connecticut"; the stream itself winding along like a great ribbon of silver,— all these afford scenes worthy the study and the skill of any artist, however fastidious he may be. Most of our ladies consider music, a great, and a very necessary accomplishment, in the sum total of their polite attainments, but painting and drawing will bring them into more immediate communication with

nature, and while they make sweet melody with their voices, and even upon "stringed instruments"; let them also be able to transfer to canvass, those beautiful rural scenes around them, decked in beauty, through God, by the benignant hands of the Seasons, and then music shall *clasp hands* with art, and confer upon them a twofold blessing. May we not hope, that another Season may afford us, through the exertions of our "*home artists*, many original specimens of paintings and landscape views, that shall do both them, and our society honor?

FANCY ARTICLES.

Our exhibition is always honored and adorned by a great variety of beautiful specimens of handicraft, the product of the dilligence of our wives and daughters, in the department of Fancy Articles.

In fact, this section of our exhibition is very nearly related to that of the Fine Arts, and it is sometimes very difficult to separate and class articles in their proper places, drawing the line of distinction between Art and her less pretentious Sister. Many articles in this department, betray the possession of as much skill and taste, and even imagination in the Artisan, as would be required in perfecting a first class orginal painting or drawing. Designs in Crocheting, Worsted Embroidery, lace making, and in the manufacturing of the innumerable creations of genius on exhibition, require no small amount of inventive and executive talent. Fancy articles so called are usually "*things of beauty*" and often of great utility. When beauty and utility can be combined in the production of an article, the advantage gained is twofold, for while the eye is pleased a real benefit is conferred. A great many of the articles on exhibition in this department, are either portions of decorative and ornamental apparel, or else they enter into that list of choice conveniences without which no

well regulated parlor, in its special adornments would be considered quite complete.

Picture frames, wrought in cone and shell work—fancy chair and ottoman covers of silk and velvet patchwork, or worsted embroidery,—fancy card baskets, and lamp-mats, watch cases done in colored beads, and a thousand pretty and useful things I cannot name here, go to make up the long list of the interesting catalogue usually presented for our inspection and approval. This department, also, should receive that encouragement it so well deserves. It was the policy of your Committee to reward *every exhibitor*, giving the largest premiums to articles of the most merit. By so doing, exhibitors will in the future be encouraged not only to *swell the list of articles*, on exhibition, but to compete for the largest premiums, by producing articles of superior excellence.

In closing, we would say, that we believe it to be the duty of *all* Committees, to be punctual in attendance, and to attend faithfully to their duties. Not one of the Committee appointed was present, but our "*better-half*." Acting as chairman protem, we humbly submit our report. DAVID RICE.

Leverett, Oct. 1865.

Report on Honey and the Honey-Bee.

In offering their Report on this sweet theme, the Committee do not intend to write a treatise on Beeology. They desire, rather, as did a good old deacon of whom you may have heard, "to express a few remarks," which may serve the interests of those engaged in the rearing of bees. "De gustibus non est disputandum"—concerning tastes, there should be no dispute—it is said, and yet to us it seems strange that there should be any diversity of opinion respecting the pleasure derived from the consumption of honey. But true it is, what is meat to one man is often poison to another; and hence the diversity of views and tastes.

From history, both sacred and profane, we learn that some countries abound in the product of honey. Indeed, the land of Canaan is described as "flowing with milk and honey." And should it prove true that by this all sweet substances are intended; yet from the great number of bees found there at the present day, the prime reference doubtless is to honey as the product of the bee. In India, especially, and in the Indian Islands, the forests swarm with bees, so that in the language of Mr. Roberts, they "literally flow with honey; large combs may be seen hanging on the trees, as you pass along, full of honey." Not unlike this are the woods upon the western coast of Africa. Between

Cape Blanco and Sierra Leone, and especially near the Gambia, it is said, "these are full of bees, to which the negroes formerly, if not now, paid considerable attention, for the sake of the wax."

Their hives were made of reeds and sedges, in the form of baskets, which they suspended upon the outer boughs of the trees, so thickly as at times to cause them in the distance to resemble the fruit of the trees. Of the abundance of honey as elsewhere found—the product either of the wild bee or of those readily coyed into the suspended hive—evidence is not wanting. But as we look about us, should we say even we see a land flowing with milk, well might we ask, where is the honey? Of no Canaan fields, of no Indian wilds, of no African thickets, teeming with bees and rendered sweet by the juices pressed from the fragrant flower, can Hampshire County boast. As compared with other lands, truly are the honey makers in this region "a feeble folk." Since, then, with us, honey does not grow of itself, or spring out of the earth like a plant, the question comes, shall we possess it? Shall this delicious product enrich our larders? Shall this luxury gratify the palate of our friends? shall it tickle our own palate even? If to these questions an affirmative response is given, then does it become us to care and make provision for the little busy bee, which "improves each shining hour" in gathering for us these delicious sweets.

But in making provision for these little busy bodies, we do not gratify the palate merely; we may also replenish our purse; for surely a large profit accrues or may accrue to the wise apiarist. This is readily seen. Should we not think five, or six or even one hundred, per cent., a large income for our money or our produce, to insure us? Yea, verily, and yet even this high amount, is sometimes yielded by these little workers. The statement made by one a few years since is: "By the mode I pursue, certain swarms are made to pay, in the increase of stock and honey, a profit of 100 per cent., while others give from 500 to 600 per

cent. The average profit upon my entire stock for several years, has been 327 per cent., per annum." Such a statement as this speaks well for the little bee. It shows what has been done by them; and what they have done, who shall say they may not do again; yea, even surpass? Such a profit as already described might have endangered the ancient Jews title to Zion; and at the present day it might be thought to border on the boundary of usury, to say the least. But enough of this. Sufficient has already been said to show that the production of honey and the honey-bee, may be made both pleasant and profitable.

THE APIARY.

If now we would unite the useful with the agreeable, what shall be done? To this question let me reply first, have respect to your *Apiary*. If you would raise honey, you must have bees; and if you would have bees, then for them you must provide a home. For bees are like riches. If they are not cared for, if they are not made happy and contented, they "certainly make themselves wings; they fly away as an eagle toward heaven." Since then we must have an apiary of some form, what shall that form be? Upon this point tastes are evidently diverse. Not long since, we observed somewhere in the neighborhood of fifteen or twenty hives stationed in a row; each was mounted upon the top of a perpendicular post, and so far apart were they, that a coach and four might pass between them without detriment to either it or the bees. If vision serves us clearly, the dome of heaven also furnished their shelter above, and the pleasant light of the moon and the stars by night, while the scorching sun by day, rested fully upon them; for not even a bough of any kind was near to protect them. Now this is one kind of an apiary; but we must confess that it does not happily accord with our notions respecting it. The opposite extreme to this, is a close and well walled

building on all sides, with only a comparatively small opening for passage-way. But to this structure we equally object. Both poles should be avoided ; for truly between these there is, doubtless, a golden mean, far preferable to every other structure. A very simple arrangement would be this, and we believe it will meet all the wants of the bee, and present fewer obstacles to it than most any other. Erect at regular intervals in the ground, where you locate your bees, a few perpendicular posts of sufficient length to be made firm in the earth, and at the same time, to allow a form to be constructed upon which the hives may rest, and also a roof to shelter these from the rains and snows and from the heat of the sun. Should no hill or embankment protect this simple, open structure, let a wall or a board screen be erected a little in the rear of it, for the purpose of breaking the strong currents of air which might otherwise sweep through it to the great detriment of the bees. With such an apiary as now described, the bees will have free ingress and egress in all directions, without experiencing the hostile blasts at home ; and yet experiencing a proper circulation of air, which is very desirable, yea, essential to their comfort.

To add a thought farther here, we observe, it matters comparatively little which way such an apiary fronts. The bees will readily depart and return to their hives, let this be in any direction. In the location of his apiary, therefore, let the bee-keeper be guided by the situation and the conveniences of his garden, selecting, however, as pleasant a place as can be found. An easterly or southerly front is preferable, especially if it opens upon flowery fields, and is under the overspreading arms of some noble elm or other shade tree. For the bees there should be a shade either natural or artificial, at least in Summer. Upon this point well does the idea of Virgil agree with our own,

> "First, for thy bees a quiet station find,
> And lodge them under covert of the wind:

For winds, when homeward they return, will drive
The loaded carriers from their evening hive.
Far from the cows' and goats' insulting crew,
That trample down the flowers, and brush the dew;
The painted lizard, and the birds of prey,
Foes of the frugal kind, be far away."

THE BEE-HIVE.

But hives are as essential to the culture of the bee as are apiaries themselves. Of what kind then shall these be? Just here the difficulty arises, as the multitude of patent hives indicates. Well has one said: "To criticise the productions of art and science is easy, but to create them is difficult." Thus it would seem to be respecting the creation of *the* bee-hive. Easy, indeed, is it to construct new fangled hives, but *the hive* that shall surpass all others in utility and simplicity of structure, that is the point. The true philosophic principle in the construction of machinery, is to make the machine which is to accomplish a given work as simple as possible. Now it seems to us that this principle might and should be employed in the construction of the bee-hive. For what is the object of the hive? It is simply this, to furnish the bees a suitable place, where they may rear their broods, provide their winter's supply of food, and deposit their surplus honey, so that the owner may easily and safely possess it without detriment to the bees. Now this can be accomplished with a very simply constructed hive—a hive which every apiarist, or farmer even can make for himself. The hive of which we speak is as good, yea, better, than those complicated structures so often found in the apiaries of the wealthy and the fanciful, but which are not wanting upon the benches of the less favored. So complicated are some of them that it must be more than a sabbath day's journey for the bees to pass through all their windings; and it seems as if the bees would need to be furnished with the clue of Ariadne, with which to extricate themselves. Now instead of all

to preserve his stock alive, or to increase it in the least degree. But though it may be good in its place, as a general rule we think there is "a more excellent way." This we deem to be that of *natural colonization*. Here in accordance with the laws of their nature, governed by their own instinct, they issue from the old homestead to find anew home for themselves,—a home where they may enter upon all the departments of domestic life, and economy, and enjoy all its felicities. This mode of colonization we believe to be the true, the natural, the best one—the one to be followed, unless adverse circumstances compel to a different course. In this, our idea accords with that of one who has had experience in bee culture. To use the language of another, "I have had much experience in the production of 'artificial colonies,' and also in what is termed the non-swarming system of bees. But I have abandoned both, and am satisfied that the bees know the best time and mode of conducting their colonization." Truly of bees, no less than of birds, or of animals in the highest and even to the lowest species, as regards colonization, may it be "said-natura optima et sapi entissima mater"—nature is the best and the wisest method.

But as in the natural swarming of bees, they issue from the maternal hive, unguided by man, the question comes, how shall these be gathered into their new home? It is customary for bees, upon swarming, to alight at first near the hive. This is the same as to say to the owner, "here we are; and, if you will make us a new and happy home, we will cheerfully work for *you*; but if you will not thus provide, we'll away and work for *ourselves*." By this process of theirs, they try their strength, they plume their wings, and prepare for a journey to the owner, unknown. Now if by any means, they can be induced to alight handy for hiving, a great thing is accomplished. They generally will have their own way. But it is said, that a board placed in front of the apiary, having one end resting upon the ground, and the

other upon a post erected for that purpose is a good place for the bees to swarm. That they do sometimes do this, is kown. But, that they always will do this, we cannot affirm. Surely this is a simple means for the apiarist to try to induce the bees to swarm within his power. The experimenting with such a swarming board, can do no harm if it does no good. But should it do good, it is well worth the knowing. For one great source of pleasure in the colonizing of bees, is to have them swarm in places of easy access, and dislodgement. But, being alighted in almost any place, they may be hived and returned to the apiary. Before hiving the bees, the hive should be made sweet and clean. It should have been kept from the weather, and used for no other purpose, save the happy culture of bees. A sweet hive may be cleansed by rubbing it in the inside with a few leafy hazlenut boughs dipped in a solution of salt and water, or with a few walnut leaves, (either branch being fragrant to the bee,) and then sprinkled with a solution of honey and water. This attaches the bees to their new home when once therein, and forthwith they begin to deposit their own comb and honey. But how shall this army, it may be, of 50,000 strong, all supplied with fine, gleaming steel, and commanded by a powerful queen, be thus transferred from the place of alightment to the hive? This is sometimes a difficult work; and, yet usually it can be done with little or no detriment to the bees, or to the owner of the same. We would not delay the advancement of science or knowledge, but were we to hive bees, seldom or never would we cut off the branch of the tree, upon which they have swarmed. Certainly we would not do this, when this would injure the tree and could be avoided. Place a table near the swarm, upon which a strip of board may rest, or spread a clean linen cloth upon the ground upon which a like strip of board may lie, and then if the bees are suitably alighted, turn your hive bottom upwards, and with a sudden jar of the limb they will fall upon the hive which is now

this complexity, a simple box-hive is all that is essential. Such an one as we would advocate is perhaps fourteen or fifteen inches square at the bottom, and is eighteen or twenty inches in height. It contains two departments, an upper and a lower. In this latter one the bees rear their broods and deposit their winter's provisions; hence it should possess ample room. Into the former, honey-boxes are inserted to receive the surplus honey. These are inserted through a door in the back part of the hive, opening into the upper department only; and they are connected with the lower department by means of narrow apertures, which will admit the bee, but which always should be closed until the bees have amply provided for themselves; then they may be opened to their use. These honey-boxes should not be very large, nor as they are sometimes seen, square on the bottom. Rather should they be in the form of parallelopipeds, from five to six inches square at the end, and from ten to twelve in length, having glass at one end, for this convenience of the apiarist in observing the deposits. We deem the boxes now described, preferable to the large square ones for this reason, if for no other, the same amount of honey looks better in them, and generally will contain comparatively less empty cells. Then again, the trouble of exchanging a full box often for an empty one is not prejudicious at all, for who would not often desire this little trouble? The luscious look doubly pays for all this, and the owner has the money besides.

Upon the face of the hive, at or near the bottom, is a narrow passage-way for the bees. This should be narrow, of whatever material the hive is made, as Virgil says, "whether this be compacted of hollow bark, or woven with limber osier," yea, or of boards. In general, narrow inlets are all the bees need for their use, and they prevent the ingress of many insects which might prove destructive to the bees. During the warm weather, however, it is well to raise the hive from the form-board upon which

it rests a lttle, by means of a few narrow sticks placed at the corners of the hives. This arrangement will give the bees a better circulation of air at that season ; more easy access in the swarming time, and a greater opportunity to remove all foreign substances, should any such find admission to the bees sacred domain.

THE COLONIZATION OF BEES.

We come now to another department of bee culture, and it is an important one. Shall we colonize bees, or shall we not? If so, how shall colonies be promoted? Unless we would lose our stock, truly we should promote this, and this may be accomplished in various ways. One way to do this, is to import bees. But is this the best way? Truly are Russia, Germany and Italy ready to supply your demands; yea, Siberia, Africa and South America, will willingly lay their hordes at your door. But will this mode of increase pay? For the common farmer it will not pay. The rich may thus increase their store, and experiment at great expense for the benefit of the poor, if they choose. But the first outlay for imported bees is two great, too serious a drawback for the poor here to embark. He can only let the rich engage in this enterprise, and gather the few crumbs of information and honey-drops, which fall from his more wealthy friend's table.

Another mode of colonizing, is that of "artificial Colonies." By this method, the apiarist drives from a single hive, just at the right season, the old queen with a suitable number of bees to make a swarm, which are transferred into another hive. Or another mode is to gather bees from the various hives, among which shall be a queen. These are all located in a hive newly prepared, which they soon adopt as their future home, and in which they readily become a happy family, and engage in all the duties and pleasures of house-keeping. Truly artificial colonizations may be expedient, and even the best at times; yea, circumstances may even compel the owner to adopt this mode, in order

the comb or strained from the broken cells, it is pleasant to the taste, and good for food. In medicine it is useful as a detergent and an aperient; yea it enters largely into the practice of pharmacy. Boiled with water and enriched with spices and fermented, we have the delicious metheglin, the wine that gladdens the heart of man, or even bears, vinegars and soups. From the comb wax is made, a useful article in the laundry, and essential perquisite to the seamstress, and, as in nothing is light more essential than in religious things, how often does the burning wax of the chandler's art, furnish that very light. Numerous are the uses of honey and wax, and true do the products of the bee combine the useful with the agreeable and exhilarating, and afford pleasures not always to be despised.

LESSONS OF THE BEE.

Truly, our "labor is upon an humble theme, but not mean the praise, if the adverse deities assist us, and Apollo invocated hear."

Various lessons may indeed be derived by us from the little bee, a few only must suffice. See the bee from early dawn and through the live-long day, perched upon the flowers of the field. From one after another does he cull the sweet nectar, until late at night he returns home with wide destended sac, to spend an almost sleepless night in the immediate cares of home. From his indefatigable toils, well has he earned those beautiful lines,

> "How doth the little busy bee
> Improve each shining hour,
> And gather honey all the day,
> From every opening flower."

Well may the bee here become the instructor of man.

Another lesson derived from the bee is, that humble but honest labor is not to be despised; yea this is the best policy for all. The life of the great mass of the bees is one of unceasing activity. Diligent laborers themselves, they are not pleased with loiterers about their hives; neither will they allow drones there to remain

after certain seasons. When the time comes to rid themselves of these, they do not wait for a trial by jury ; they then have recourse to the linch law. Instinctively do they believe in the great gospel truth, if a man "will not work, neither should he eat." Now though we are not at all disposed to favor the linch law ; yet we fully believe that drones and do-nothings in a community are no benefit on the whole to themselves or to their neighbors, and that they should if possible be made to feel that honest labor of any kind is not degrading but ennobling to man.

Again, we learn from bees, that division of labor is for the best interests of all concerned. Look at the bee. When young and unable to go forth on ceaseless wing, it feeds the brood, builds cells, prepares the bread, dilutes the pollen, and performs other work about the hive, while the older bees furnish the all needful supplies. See them now as they go forth to their own new home. Without any difficulty in assigning the parts, one engages in the gathering of honey, another in collecting the pollen, another in forming the cells on the principle of the greatest space with the least amount of material, another still as watchman, and so through the whole community. What harmony here exists! What regularity in their work, well worthy the imitation of man. Now how different is this in some communities of men. Here, as they say, some are "jack at all trades," but how often is it that such are good at none. Some will make and botch every thing they possess, rather than spend a single cent, regardless of beauty, utility, personal ease and comfort, or the happiness of themselves or of others. They will get all they can, and keep all they get. To such it may be said, go to the bee, "consider her ways and be wise."

Again the bee teaches us a lesson of loyalty to the government. Among the bees there are no copperheads, no disloyalists, no traitors, no free-booters, no doubtful warriors, no stupid and rum-besotted generals, no delinquent, cowardly officers, no de-

turned over upon the table or the cloth, with one corner of it resting upon the stick above noticed. If the hive is sweet, usually your work is done, until at nightfall you replace them in your apiary, or should they not be favorably situated for this mode of hiving, with a wing, you can carefully brush them into the hive; or yet again, you may suspend the hive just above them, and if you choose throw a clean linen cloth over them. If the hive pleases them, they will soon take possession without much more strategy on your part. Bees will seldom leave a sweet hive, when they are once placed therein with their queen, and though better modes for hiving bees may be devised, none has ever come to our notice better then the one now expressed.

ENEMIES OF BEES.

As the ocean does not always furnish a calm, smooth sea; as the weather on shore is not uniformly fine and fair, so in bee culture, all is not always fair weather. The apiarist is liable to losses from various sources,—some of which we can, and some of which we cannot provide against. Diseases, more or less prejudicial to the prosperity of the bees, come upon them. The bee-moth—that pest of the hive, infests this. Ants are sometimes found therein, mice not unfrequently intrude. Birds catch them, while on the wing. Toads, frogs, lizards and snakes consume them when within their reach. The hornet and other insects overpower them by their superior strength. The spider weaves for them his slender net. Cold winds, sudden showers, and the fleecy snows prevent their safe return to the hive, or the robber-bee, and the bee-robber take advantage of them while off their guard, or of the secrecy of the night to do their foul deeds. Thus against these and other foes, are the bee and the bee-keeper called to contend; and while the latter may not always succeed, watchful, though he may be; yet in the main, here it will be still true, "labor omnia vincit"—labor conquerors all things.

FEEDING BEES.

One great object of bee-culture, is to obtain from the bee the greatest amount of honey. Now how shall this be done? Will feeding answer the purpose? By giving them an inferior sweet, shall we receive a more delicious one? Shall we feed therefore, or shall we not feed the bees? To this we answer, experience teaches that this practice does not amount to much, when more honey is the sole object—that this does not increase the amount of marketable honey—that no one ever receives back the amount fed, or has the quality of this much improved. Hence giving to the bees an inferior article to obtain in the end a superior one, does not gain much favor. You may as well search for the philosophers stone, to change every thing into gold, or the alchemists universal solvent to change all substances into their original elements, as to take this course. Again, should you feed your bees, they might imitate the loiterers and tattlers in the street, instead of continuing their well earned title of busy-bee. We have no doubt, however, but under certain circumstances, it is well to feed bees. For instance, when without this supply they will perish for lack of food, or when a person, having a large number of small swarms, does not wish to diminish these by consolidating them. Under such circumstances he must feed; but even then, he must not use the multitude of common sweets, unless he wishes to ruin his whole stock. Such a course would make a Ben Franklin of many a man, by paying too dear for his whistle.

PRODUCTS OF HONEY.

Setting aside the bees themselves, we now approach to us the pleasantest part of bee culture. How delicious is honey! It is one of our pleasantest luxuries. Look at the clean, white, silver-capped cells, all filled with the delicious, aerial, ambrosial sweet, a fitting nectar for the gods! Who does not like it? Either in

serting, skulking privates. No, they are all loyal to their queen. For her safety they are all ready to hazard their own lives in the breach; all willing to leave their own proper work to become soldiers when war is in the camp; and, rather than seek exemptions from military duty, to die honorably and gloriously on the field of battle. How different is it with *us* at the present day! Well may we seek and learn lessons of loyalty from the little bee, of which one has well and not very untruthfully versed.

"But if intestive broils alarm the hive,
(For two pretenders o:t for empire strive,)
The vulgar in divided factions jar,
And murmuring sounds proclaim the civil war.
Inflamed with ire, and tumbling with disdain,
Scarce can their limbs their mighty souls contain,
With shouts the coward's courage they excite,
And martial clangors call them out to fight;
With hoarse alarms the hollow camp rebounds,
That imitates the trumpet's angry sounds;
Then to their common standard they repair,
The nimble horsemen scour the fields of air.
In form of battle drawn. they issue forth,
And every knight is proud to prove his worth.
Press'd for their country's honor, and their kings
On their sharp beaks they whet their pointed stings;
And exercise their arms, and tremble with their wings."

Report on Stallions, the Horse and Breeding.

The committee appointed to examine and report on this class of horses, ascertained from the Secretary, that but three entries were made; and of these, but one horse was exhibited, and that, a "Messenger and Morgan", as it was called by the owner, Mr. Asa Wilson, of Belchertown, to which the third premium was unanimously awarded by the members of the committee present.

As the subject of breeding domesticated animals of the farm is one that deeply interests the members of the Hampshire County Agricultural Society, as it does the members of every other similar Society in the Commonwealth, it is now proposed, in compliance with the expressed desire of the President and Secretary, with the approval of the other members of the committee, to submit some views and considerations touching that department of the subject which relates to the principles, the theory and practice of breeding horses. In complying with these desires and wishes, the chairman is fully aware of the difficulties with which his subject is encompassed; and, therefore, if the views and considerations which he has the honor to present upon these topics, should not be entirely approved and indorsed by all, he will not be surprised; for no one has ever written upon this important and difficult subject or the topics

thereof, with universal approbation. He hopes, however, to present his views and considerations in such a manner, that they may serve to aid the young farmer who is inquiring for information in regard to this department of stock breeding.

The place of the horse in the vertebrate animal kingdom, according to the systematic arrangement of VAN DER HOVEN, the Dutch Zoologist, is in class XVII., called Mammals, (*Mammalia*), order IV., *Pachydermata*, Family XIV., Salidingula: feet with a single perfect toe, covered by a broad hoof without supplementary hoofs. Incisors in a continuous series in both jaws; molar teeth complex. Two inguinal mammæ. Incisors $\frac{6}{6}$; canines, $\frac{1-1}{1-1}$ or none; molars in adults, $\frac{6-6}{6-6}$; in younger individuals with a small anterior molar, deciduous, (*wolf tooth*, of Dutch writers.) All the species of the genus *horse*, belong to the old world, says the author quoted, and are at home on the wide mountain-plains of Asia and Africa. They live in troops, are swift and feed chiefly on grass. The intestinal canal is wide and long; they have a single stomach, a large cœcum, and no gall-bladder. The horse, (*Equus Caballus*,) is not now met with in its original wild State, but has returned to that state in the *steppes* of Asia and the extensive plains of South America. The wild horses differ from those in domestication in having larger heads, and smaller bodies. Of all the domestical animals, none is a greater pet with man than the horse. The period of gestation is eleven months. In the fifth year, the milk teeth are usually replaced by permanent teeth. The horse lives about thirty years; but there are cases on record of forty years or more having been reached by this beautiful and highly useful animal. It is difficult to determine the country of the old world of which the horse was a native. Some writers assign

Arabia as its home, while others claim Egypt. The first mention of the horse is in Genesis; and it, like the cow, sheep and dog, appears to have been early placed under the direction of man as if created "a domestic animal" for his use, howsoever, whensoever and wheresoever needed,—and always to be humanely treated when thus employed, for, the merciful man ever regardeth the life of his beast, said an ancient oriental Sage. Having thus briefly sketched the history of the horse, it may not be deemed inappropriate to cite Job's inimitable description of this animal, so transcendently sublime and grand, elegant, truthful and beautiful, as to have been the admiration of all past ages as it will continue to be of all coming time. It is quoted as thrown into the hemistich form, as it appears in the original, in which Hebrew poetry is written. God is represented as speaking to Job and asking him:—

Hast thou given the horse strength?
Hast thou clothed his neck with thunder?
Canst thou make him afraid as a grasshopper?
The glory of his nostrils is terrible!
He paweth in the valley, and rejoiceth in strength:
He goeth on to meet the armed men.
He mocketh at fear, and is not affrighted:
Neither turneth he back from the sword.
Against him rattleth the quiver,
The glittering spear and the shield.
He swalloweth the ground with rage and fierceness:
Nor doth he believe that it is the sound of the trumpet.
He saith among the trumpets, Ha, ha!
And from afar he scenteth the battle,
The thunder of the captains, and the shouting.

In comparing this marvellous description of the horse by the great Hebrew poet,—compassing all the great and sprightly images which the thought of man can form or conceive of this proud animal, expressed in a style of vigor, force and beauty,—with the descriptions of Homer and Virgil, those of both the

latter seem tame and powerless. Dr. Clark adds:—"I cannot but particularly observe, that whereas the classical poets chiefly endeavor to paint the outward figure, lineaments, and motions, the sacred poet makes all the beauties to flow from an inward principle of the creature, described, thus giving great spirit and vivacity to his description."

Of the horse in the United States as of the cattle of New England, Mr. Flint, Secretary of the Massachusetts Board of Agriculture in his fifth annual report, says:—"It is true for the most part, that they form no distinct breed, but owe their origin to sources equally various, to the English, the French, the Spanish, the Flemish, and the Danish horses, imported at different times by the early settlers, as suited to their convenience. The only race, that can claim exemption from this remark is the thorough-bred, traced to the blood of the Arabian, the Barb, and the Turk."

Herbert in his book, "The Horse of America," says. The thorough-bred horse of America is the only family of pure and unmixed blood on this Continent." Then he adds, "The only thing that constitutes a truly thorough-bred horse, is that he either proves back directly on both sides to oriental sire and oriental dam, or proves back so far, into the mist of antiquity that the memory of man runneth not to the contrary."

Mr. Herbert in speaking of the Vermont draught horse, says, "Whence this admirable stock of horses came, or how it has been created, there is no record. . . . I have little hesitation in pronouncing that the bay draught horse of Vermont, has in its veins principally Cleaveland Bay blood, with some cross of thorough blood, one at least, directly or indirectly, of the improved English dray-horse, and not impossibly a chance admixture of the Suffolk. . . . All that I believe

or desire to put forth, is, that there exists a type of horses of great merit for many purposes, over a large district, subdivisible into some three or four classes, modified by more or less blood—of thorough blood,—yet all showing the characteristics of the other English families named, and doubtless have derived their own peculiar merits from those several families. . . . The mares of the various classes of this type, from the heaviest to the lightest, are the best brood mares I have seen in America from which to raise stout, hardy, sound, active and speedy stock for all practical purposes, to well selected, large sized, bony, thorough-bred Stallions. . . . This is nearly what I believe to be the history of the Morgan horse, as styled,—that is to say, I believe it to be an entirely artificial animal, probably, in a great degree in this instance, by possessing a small portion of one particular strain of blood. The perpetuation of that strain by in-breeding, or by breeding from sires of that race, either with cold-blooded, or hot-blooded mares, I know to be impossible, for the original strain must go on, from generation to generation, in a scale *diminuendo*. But that the same stamp of horse can be again reproduced, reproduced *ad infinitum*, by having *recourse to the same system of artificial crossing which produced it*, and that many, if not all its best qualities may be retained, or even improved, by judicious breeding, I in no wise doubt or dispute."

In order to show that the English thorough-bred has had much to do in improving the horses of this Country, it is only necessary to state that a list of 282 thorough-bred Stallions, imported hither from England, is on record, and mostly within the last hundred years. In these importations, the best blood of England has come to our country to improve the quality and style of our horses: hence, they are, *what* they are to-day, be-

cause of blood. The list of imported mares is supposed to be more numerous than that of sires. It is claimed both for the Morgan and Black Hawk horses, as for the Messenger and other noted horses, that they were made what they were by thorough blood. This being universally admitted, why should not thorough blood still be used by all desirous of improving their stock? It is not proposed to discuss the origin of the thorough-bred, for want of space will not permit. That there *is* such a distinct and generally recognized type of the horse family, none will deny. This is sufficient for the present purpose of the committee.

Stonehenge, a modern English writer in discussing the principles of breeding, says, as "the food of the embryo depends entirely upon the dam, it may be expected that the health of the offspring and its constitutional powers will be more in accordance with her state than with that of the sire; yet, since the latter impregnates the germ, it is not surprising that in *externals* and general character there is retained a *fac-simile*, to a certain extent, of him. . . . The preponderance of one or the other of the progenitors will depend upon the greater or lesser strength of the nervous system in each. No general law is known by which this can be measured, nor is anything known of the laws which regulate the temperament, bodily or mental power, color or conformation of the resulting offspring. . . . As bad qualities are quite as easily transmitted as good ones, if not more so, it is necessary to take care that in selecting a male to improve the stock, he is free from bad points, as well as possessed of good ones. It is well known from observation, that the good or bad points of the progenitors of the sire or dam, are almost as likely to reappear in the offspring as those of the immediate parents in which they are dor-

mant. Hence, in breeding, the rule is, that like produces like, *or the likeness of some ancestor.* . . . Therefore, the purer or less mixed the blood or breed, the more likely is it to be transmitted unaltered to the offspring. Hence, whichever of the progenitors is of the purer blood, that one will generally be better represented in the offspring; but as the male is usually more carefully selected and of purer blood than the female, it follows that he exerts more influence than she does; the reverse being true when she is of less mixed blood than the sire. . . . The influence of the first impregnation seems to extend to the subsequent ones; this has been proved by several experiments, and is especially marked in the equine genus. In the series of examples preserved in the Museum of the College of Surgeons, the markings of the male quagga, when united with the ordinary mare, are continued clearly for three generations beyond the one in which the quagga was the actual sire; and they are so clear as to leave the question settled without a doubt. . . . When some of the elements of which an individual sire is composed are in accordance with others making up those of the dam, they sometimes coalesce in such a kindred way as to make what is called a 'hit.' On the other hand, when they are too incongruous, an animal is the result wholly unfitted for the task he is intended to perform."

Herbert in "The Horse of America," adduces several instances in which a "hit" has occurred, by carrying out the last axiom cited above. He says, "I think that it is clear by recent events, that, previous to the last quarter of a century, (1857) the American turfman was breeding in too much of the old Virginian and South Carolinian ante-revolutionary stock, and that the American racehorse has been improved by the recent cross of modern English blood. It is also worthy of re-

mark, that every one of the foremost successful of modern English Stallions in this Country, which have most decidedly hit with our old stock,—Leviathan, Sarpedon, Priam, and Glencoe,—all trace back to several crosses of Herod blood; Glencoe and Priam not less than three or four times each to crosses of Partner blood, and directly several times to the Godolphin Barb, or Arabian, which are the very strains from which our Virginian stock derives its peculiar excellence. It is further worthy of remark, that two Stallions have decidedly *hit* with the imported English mare, Reel, as proved by her progeny, Lecompte and Prioress, respectively to Boston and Sovereign. Now Reel, through Glencoe, Catton, Gohanna, and Smolensko, has herself no less than seven distinct strains of Herod blood. Boston traces directly through Timaleon, Sir Archy, Diomed, Florizel, to Herod. Sovereign, also, through Emilius, his sire, has Herod on both lines as his paternal and maternal g. g. g. sire; and Tartar, the sire of Herod, a third time in one remove yet further back. This goes to justify the opinion of Stonehenge, that the recurrence to the same original old strains of blood, when such strains have been sufficiently intermixed and rendered new by other more recent crosses, is not injurious, but of great advantage; and that, on the whole, it is better, *cæteris paribus*, to do such, than to try experiments with extreme out-crosses."

Did space allow, something might be said of in-and-in breeding, out-crossing, the advantages and disadvantages of each, the causes of a "hit," but these topics must now be passed over. The importance of health and soundness in both dam and sire, is now generally admitted. Defects from accidental causes, as blindness from over-feeding or over-driving, they not

being hereditary or constitutional, may be disregarded, as in the case of Lexington. Stonehenge recommends a Government inspection of all horses and mares used for breeding, as a national good; for it would be a guaranty against constitutional and organic defects. As to the age for breeding, the mare should not be less than three years old and the sire to which she is put should not be less than eight years old, that is to say, he should be of full maturity.

Of the influence of sire and dam, Abd-el-Kader an Arabic writer says: "It is true, the foal proceeds from sire and dam, but the experience of ages has proved, that the essential parts of the body,—such as the bones, tendons, nerves, and veins,—proceed from the sire. This is true beyond doubt. The most ignorant Arab knows that any malady specially belonging to the bones, under which the sire may be suffering, at the time of covering, will be perpetuated in his produce, such as splints, bone and blood spavins, the shape of the bones and all diseases of the vertebral column. The dam may give to her produce, color, and a certain amount of resemblance in form, the foal naturally partaking of some of the qualities of the animal which had so long borne it; but it is an *incontestable fact*, that it is the sire which gives strength to the bones, substance to the tendons, vigor to the nerves, rapidity of pace, in short, *all the principal* qualities. He also communicates what may be called moral (?) qualities, and if he be of unquestionably high blood, the foal is preserved from vice. Our fathers have said, 'A horse of noble race has no vices.' An Arab will lend his Stud horse gratuitously; he never accepts pay for his services. To hire out a Stud horse for money, is, in the eyes of an Arab, an unworthy action, and is contrary to the gener-

osity for which he is renowned, and, although the law allows it, I have never known an instance of it. But though the Arab lends his horse gratuitously, he does not do so to the first comer for any mare. No: the suppliant is often obliged to make use of the intercession of persons of great interest, or of his wives, if he would not see his request refused. On the other hand, the Arabs are very difficult in their choice of a Stud horse, and if they cannot find one of pure blood, they prefer leaving their mares unproductive rather than put them to a common horse. To procure a good sire they do not hesitate to travel any distance. The proceeding discussion has already intimated my conclusion, to wit, that the sire has more to do for the foal than the dam. And my conclusion is identical with the *universal* opinion of the Arabs. They say, *El hær ilebal el fahal*—'THE FOAL FOLLOWS THE SIRE.'"

In confirmation of this view the writer quoted above, describes the Arab horses, as distinguished under the following heads:—"*El Horr*, *El Hadjim*, *El Mekneref*, and El Berdoune. The first is that when sire and dam are both of noble race; the second, when the sire is noble and the dam of common race; the name implies defective; the third is when the dam is high-bred and the sire half-bred, and is of much less value than the second, on the same principle that a man whose father is white and whose mother is a negress, is superior to him whose mother is white and whose father is a negro; and the fourth is that class when both sire and dam are badly bred, an animal that is reported as a stranger in Arabia. "The value of a horse is in its breeding."

In regard to the respective value put by the Arabs on their

Stallions and mares Ab-el-Kader says: "Arabs prefer mares to Stallions for the following reasons: first that they look at the profit which may arise from a mare as very considerable. Some breeders have realized $20,000 from the produce of a mare. They have a proverb, 'The fountainhead of riches is a mare that produces a mare.' This is corroborated by Mahomet who said, 'Let mares be preferred, their bellies are a treasure, their backs the seat of honor.' 'The greatest blessing is an intelligent wife, or a mare that produces plenty of foals.' These words are thus explained: Their bellies are a treasure, because the mare by her produce increases the riches of her master; and their backs are the seat of honor, because the pace of a mare is easier than that of a horse; and there be those that say it is sufficiently so as in time to render a horseman effeminate. The second reason is, that a mare does not neigh in war, that she bears hunger, thirst and heat better than a horse, and that therefore, she is more useful to people whose riches consist of camels and sheep. Our camels and sheep thrive only in the desert, where the soil is so arid, that Arabs drinking chiefly milk, find water seldom, oftener than every eight or ten days, in consequence of the distances between the pasturages found in the neighborhoods of wells. The mare, like the Serpent, increases her powers in hot weather and in arid Countries. Serpents living in cold or wet Countries have little venom, or courage, whereas those living in hot and arid Countries are more irritable and the virulence of their poison is greatly increased. While the horse less easily bears the heat of the sun, the mare finds her energies increased by the greatest heat. The third reason is that a mare requires less care and less nourishment. The owner can lead and turn her out to graze with the sheep and camels and not be obliged

to leave a person constantly watching her; whereas a horse must be highly fed, and cannot be turned out without a constant attendent. These are the reasons for an Arab's preference for mares. It does not arise from the foal's inheriting the qualities of the dam rather than those of the sire; it does not proceed from its being better at *all* times and under *all* circumstances to ride a mare rather than a horse; but it is based on material interests, and on the necessities enforced by the description of life which Arabs lead. It must, however, be admitted that a horse is nobler than a mare, is stronger, more courageous and faster. That he is stronger, is thus proved: If both were struck by the same mortal wound a mare would fall at once, while the horse would seldom drop until he had carried his rider into safety. I saw a mare struck by a ball on the leg, the bone was broken, and being unable to bear the pain, she fell immediately: a horse was hit in a similar manner, the broken limb hanging only by the skin, yet he continued his course, supporting himself until he bore his rider from the battle-field and then fell.

The Arabs prefer mares to horses for the reasons given, and these are sufficient to show why, among us, the value of a mare is greater than that of a horse, though the breeding were the same; for while on the one hand the foal takes more after the sire than the dam, on the other the proprietor of a horse cannot gain in many years as much as the owner of a mare can in one year, if she throw a foal. A horse, however, when he has displayed any extraordinary qualities, it often happens that he will not be parted with, he producing, probably to his master in the way of booty or otherwise, as much as the most valuable mare. I saw among the Annazas, a tribe extending

from Bagdad to Syria, horses so beyond all price that it was almost impossible to purchase them, and, certainly, impossible to pay ready money for them. These animals, of a fabulous value, are sold only to the highest personages, or to rich merchants who pay for them by thirty or forty instalments, or by a perpetual rent, settled on the vender or his descendents. The birth of a horse can never be considered a misfortune by an Arab, however much he may prefer a mare for the material advantages which they procure. Mares almost always produce, and it is on that account principally, that they are preferred. I repeat it—the birth of an animal that guarantees its master against humiliation can never be considered a misfortune. A poet says, 'My brothers reproach me with my debts, yet I never contracted one but for an honorable purpose. In giving the bread of heaven to all, in purchasing a horse of noble race, and buying a slave to attend upon me.'"

Stonehenge says, "My own belief, founded on much observation is, that much depends upon the comparative physical power and strength of constitution in sire and dam, even more, perhaps, than upon the composition of the blood. Where the blood is the same in kind, the difference in progeny, which often occurs must be attributable to the individual nervous system, power, energy, or something akin thereto. Something more than mere breeding must be sought to explain this, and I am inclined to think it is in the constitution, possessed by the individuals." Let these considerations be duly weighed by all breeders of horses as of other domesticated animals.

In the choice of sire and dam for breeding purposes, two much care cannot be given in regard to soundness of wind and

limb, healthfulness of constitution, endurance of performance and whatever else makes the most perfect animals. "Breeding," says a modern writer, "is always more or less a lottery," but when carried on by dams and sires of unknown pedigree, it is a hundred fold more so than it need be. "Were I," says Stonehenge, to establish a breeding stud, whether of cart or carriage horses, hacks or hunters, I would never introduce a single mare whose dam and grand-dam as well as the sire and grand-sire are not producable as good specimens of their respective kinds. Beyond the second remove there would always be some difficulty in going with the low-bred mares, but I would certainly go as far as this in *all* cases. If the sire and dam, grand-sire and grand-dam, were, on the whole, of desirable form and performances, I would choose the produce as a brood-mare, but not otherwise; and though of course, I should be obliged to pass over some important defects in individuals, I would not do so if they were common to all, or nearly all, of the four. In this way I should expect to do more than by simply choosing 'a great roomy mare' without knowing her pedigree in the belief that she would be sure to reproduce her likeness."

Having determined on turning one's attention to breeding horses, the next point to be considered, is, the kind of horses to be bred, whether farm horses, roadsters, trotters, or saddle-horses. Select as good mares as can be found in view of all the conditions, such as are specified above, then, use a sire of the best blood of the various breeds known, such as the thorough-bred, Cleveland Bay, &c. If it be desirable to breed trotters, use the pure thorough-bred sire, the best type of that blood and race that can be obtained.

The discussion which lately took place in England between Lord Redesdale and Admiral Rous, indicates plainly, what the general opinion of the diminution in the stoutness of our horses is, says, Stonehenge. Breeders should, therefore, he adds, "turn their attention to this point, and be doubly careful to avoid breedy or diseased sires and dams. It cannot be denied that our modern thorough-breds have size and speed; but they do not shine in staying powers. But there are strains particularly free from this defect. It should not be forgotten, that though the thorough-bred horse will bear more work, especially at high speed than any other kind, yet he can only do this when well-fed and warmly housed. Being a native of a warm and dry climate, he requires to be protected from the weather; and the young stock must be well-reared in all respects, or they will never pay. If, therefore, the breeder is not determined to put up warm stables, and if he is stingy of his corn, he had far better let his Stud of mares be composed of lower bred animals. If a thorough-bred horse and a donkey are both fed upon the lowest quantity and quality of feed which will keep the latter in condition, the donkey will beat its high-bred antagonist over a distance of ground—that is to say, supposing the experiment to be constituted long enough to produce a permanent effect upon the two animals. A cart-horse, colt or one of any kind of low blood, will do well enough if reared, till he is put to work upon grass and hay; but a race horse, or hunter, of high breeding, would show a badly developed frame, and be comparatively worthless for his particular kind of work, if he were not allowed his corn from the time that he is weaned."

This prolific subject is far from being exhausted; but the

length of this report forbids the further discussion of it at this time. It has been the purpose of the committee to present views and considerations, that shall aid in guiding those who are engaged in, or purpose to turn their attention to, the business of breeding horses. Let all such procure the best mares for this purpose that can be had, and then use none but sires of *pure blood*, preferring like the Arabians, that the mare shall go unproductive rather than be served by a common horse; for, "THE FOAL FOLLOWS THE SIRE."

LEANDER WETHERELL.

Bee Culture.

STATEMENT OF DAVID S. COWLES.

I procured a swarm of bees in 1837 and experimented for years with differently constructed hives, finally adopting Weeks Patent Bee-hive after making some improvements upon it. Since Phelps obtained his patent I have used his hive and prefer it to any in use. It requires some experience to use this hive. It is built in six divisions, three large boxes and three small ones, the large boxes hold thirty pounds the small ones eight. Only a few bees are necessary to guard the hive from the bee miller and robber. Moth traps are placed under the edges of the large boxes which can be drawn at any time and the moth worms destroyed. The honey made is purer for having a free circulation of air through the hive. The boxes can be drawn when they are full. I take off the samll boxes as often as the bees fill them to prevent their swarming. If bees have sufficient room they seldom swarm. The large boxes I take off in August or September. If there is a large number of bees in the hive, it is best to leave two boxes for their wintering. If in drawing the small boxes, I find I have taken the queen bee I replace her in the hive, as unlike other bees she will not know to which hive she belongs. By cutting off the communication between the boxes and rapping lightly upon the one I wish to draw, the bees will fill with honey in a few moments, and I can do what I please with them unharmed. Bees know their master, and to be made profitable must receive

some attention. I now have twenty swarms of bees. My bee-house stands fronting to the Southeast, and is protected from the North and West wind. I white-wash the shelves occasionally to keep the moth miller away and the house neat to please the bees. By keeping a neat house and clean hives I have never lost a swarm in time of swarming for the whole twenty-eight years. On warm days in March and April, I place plates of rye flour where the bees can collect it and carry it away to their hives for food for their young in the comb. The longer the comb is used to increase bees the smaller the bees will be. Owing to some peculiarity of the season, the bees have made less honey than usual, and it is not as white as that of former years. When it is collected slowly it will be of a darker color.

DAVID S. COWLES.

CROPS.

Broom-Corn.

STATEMENT OF LEVI STOCKBRIDGE.

To the Executive Committee of the Hampshire County Agricultural Society.

GENTLEMEN:—The crop of broom corn which I entered for premium was grown on two acres of ground, which was in potatoes in 1864 and tobacco in 1863. The field was put into good condition for the crop, by plowing and harrowing on the 22d of May. One half of it was planted May 24th, the remainder the 8th of June. At the time of planting, four hundred pounds per acre of Wilsons Phosphate was applied in the hill, and it had no

other manure. Nearly one-fourth of the crop was seriously injured by the drought, and did not fully mature. The yield was eighteen hundred pounds of most beautiful brush, and one hundred and forty bushels of heavy well ripened seeds. The cost of cultivating the crop, and other expenses were as follows:

Interest on the land at $273,00 per acre and taxes,	$38,00
Phosphate,	16,00
Plowing and Harrowing,	8,00
Planting,	5,00
Hoeing and Cultivating,	25,00
Harvesting,	10,00
Scraping brush and cleaning seed,	13.00
Total cost of crop,	$115,00

The credit is as follows:

Eighteen hundred pounds of broom corn at one shilling per lb.,	$300,00
One hundred and forty bushels of broom-seed at 50 cents per bushels,	70,00
Total receipts from crop	$370,00
Deduct its cost,	115,00
Profit,	$255,00

The large profit of $127 per acre was not so much in consequence of an extraordinary large crop 900 lbs. per acre, as of the small cost of the fertilizer applied to the land, and the high price at which the brush was sold.

LEVI STOCKBRIDGE.

Corn Crop.

STATEMENT OF CORN CROP GROWN BY J. M. SMITH.

The soil upon which my crop was grown in 1865, consists of what may be called alluvial.

The land is situated in Sunderland Meadow (so called) and contains by measurement nine acres and sixty rods. The crops taken from the land in the years of 1863-4, were hay with the exception of one and a quarter acres, upon which a crop of corn was raised in the season of 1864, upon which twenty-five loads of manure were harrowed in.

For the crop of the present season the land was ploughed six inches deep, a portion in the fall previous, the remainder last Spring, with no perceptible difference in the amount of the crop.

The manure was made as follows: In the Fall of 1864, several piles of muck were drawn upon the field, amounting in all to twenty loads to the acre, and with it there was mixed Fish Guano at the rate of ten hundred per acre. The following Spring ten loads of barn yard manure to each twenty loads of muck were mixed, turning twice before using. Immediately before planting thirty loads of this compost were put upon each acre, spreading broadcast from the cart, and the surface well pulverized. The seed was dropped with the corn planter, and at the same time, two hundred lbs., equal parts of Superphosphate of Lime and Plaster of Paris were dropped in the hill. The corn was hoed four times, going through with a horse five times.

The corn was cut close to the ground, bound in bundles, and shocked between the tenth and twentieth of September.

The amount of the crop was 1368 bushels of ears by measure. The amount of fodder was 20 tons by estimation.

VALUE OF CROP.

Corn 72,96 bushels per acre,	$72,96	
Fodder two tons per acre,	20,00	
One third manure per acre,	16,00	
		$108,96

EXPENSES.

Ploughing, harrowing and planting per acre,	$5,00	
Manure and Fertilizers,	48,00	
Cultivation,	8,00	
Harvesting,	12,00	
		73,00
		$33,96

J. M. SMITH.

STATEMENT OF SAMUEL S. HIBBARD.

To the Officers of the Hampshire County Agricultural Society.

GENTLEMEN :—I have the honor to make the following report respecting the crop of Indian Corn I entered for your premium:

The piece contained by measure, exactly two acres. It was in tobacco in 1863-4, and was manured with 25 loads of yard manure to the acre. This year it received 1000 lbs. of Fish Guano per acre, which was cultivated in after plowing.

The land was prepared the 13th of May, and planted the 28th, by hand. The rows three feet eight inches apart, and hills four feet apart in the row. It was hoed three times and harvested the 21st of September, by cutting at the roots and stocking eight bundles in a stock. It was shocked the third week in October, threshed the last of November. The yield was 187 bushels or 93½ bushels per acre.

The following is the debt and credit with the land; no charge being made for harvesting and husking, or credit given for the fodder.

Interest on land at $200 per acre and taxes,	$28,00
Plowing, cultivating in manure and harrowing,	9,00
Fish Guano,	40,00
Cultivating crop and hoeing,	16,00
Planting,	4,00
Seed,	50
Total expense,	$93,50
Credit by 187 bushels corn,	$205,70
Net Profit,	$112,20

SAMUEL S. HIBBARD.

North Hadley, Dec. 1st, 1863.

Rye Crop.

STATEMENT OF I. F. CONKEY.

The crop of 1863 was potatoes, on which no manure was used except phosphates in the hill. The crop of 1864 was Tobacco, on which I used one ton of Fish Guano, spread and ploughed in, with a dressing of compost made of loam, horse manure and a deposit from sinks, harrowed in, twenty loads to the acre. I gave the land one ordinary ploughing in Sept. 1864, with no other preparation for the seed. The cost of ploughing was $6.00. No manure was applied. The seed was planted in Sept. 1864, one bushel to the acre. Cost of the seed and planting $1.90. It had no other cultivation. It was harvested July 8, 1865. The cost of harvesting including storing and threshing, was $11.50. I had one ton of straw. The amount of rye obtained was twenty-four bushels.

I. F. CONKEY.

Amherst, Aug. 28th, 1864.

Milch Cows.

STATEMENT OF OLIVER WATSON.

The native cow offered by me for premium, is eleven years old, and has been owned by me four years. She calved July 18th, 1864. The calf, at seven weeks old weighed 246 pounds, was fattened wholly by milk from said cow; who besides fattening this calf supplied a family of six persons with milk and butter, during those seven weeks. During the two weeks following September 5th, she gave 266 quarts of milk, weighing 583 pounds. Her milk is very rich in cream. During two weeks she made 12 pounds of butter per week, since that time no pains has been taken to ascertain the exact amount she would make. This same cow together with another exhibited by me at the same time, produced during the ten following months, 600 pounds of butter.

OLIVER WATSON.

Treasurer's Report.

RECEIPTS.

Cash on hand Dec. 27th, 1864,	$485 92
Cash received for Life members certificates,	100 00
Cash of A. P. Howe, (error)	2 00
R. H. Howard work,	2 50
Cash from E. F. Cook, use of Park,	6 00
" " O. Watson, Dinners tickets sold,	12 75
" " E. F. Cook, from Peddlers,	70 50
" " Joseph Potwine, entrance fees and dinner,	778 62
" received from State,	600 00
" " from John Sisson for grass,	12 00
" " on Life members note,	2 00
	$2,072 29

DISBURSEMENTS.

Current expenses,	$894 91
Premiums,	497 31
	$1,392 22

PERMANENT FUND.

Hampshire Hall and Park,	$5,200 00
Cattle pens and tables, &c., &c.	275 00
Tickets of various kinds,	50 00
Life members notes, (about,)	120 00
Cash on hand,	680 17
Total Permanent Fund,	$6,325 17

Respectfully submitted,

M. N. SPEAR, *Treasurer.*

Amherst, Dec. 27, 1865.

BY-LAWS

OF THE

Hampshire Agricultural Society.

ART. 1. The Officers of this Society shall be one President, six Vice Presidents, a Secretary and Treasurer and an Executive Committee of seven, to be chosen by ballot, except the Vice Presidents who may be chosen by nomination at the annual meeting, and to serve one year, and until others are chosen in their stead.

ART. 2. The President shall preside at all meetings of the Society, and in his absence one of the Vice Presidents.

ART. 3. The Secretary shall keep a true record of all the doings of the Executive Committee and the Society.

ART. 4. The Treasurer shall keep an account of all monies, received into and paid out of the treasury. His accounts shall always be open to inspection by any member of the Society, and he shall give Bonds, in such sum as shall be designated by the Executive Committee, for the faithful discharge of his duties, and he shall make an annual report, previously audited.

ART. 5. It shall be the duty of the Executive Committee, to call special meetings of the Society, and upon the request of not less than ten members from each of four different towns they

shall call such meetings; to designate the time and place of annual exhibitions, and make all necessary arrangements therefor; to appoint Sub-Committees for examination and to award premiums; and to have a general supervision over the funds and affairs of the Society. The President and Secretary shall be members of the Executive Committee.

ART. 6. The Annual Meeting of the Society shall be held on the last Wednesday of December each year, and twenty members shall constitute a quorum to do business.

ART. 7. Notices for all meetings of the Society shall be signed by the President and Secretary, and published in some newspaper in the County, or circulated by handbills, or in any other manner, that may be designated by the Executive Committee.

ART. 8. Any male person may become a Life Member by paying to the Treasurer the sum of five dollars. Any lady, by payment of two dollars and fifty cents, may become a Life Member.

ART. 9. All premiums not called for within six weeks after the same are awarded shall be paid into the treasury and be considered as presented to the Society.

ART. 10. These By-Laws may be amended or altered by a majority of the members present at any legal meeting.

OFFICERS 1866.

PRESIDENT,

AUSTIN EASTMAN, of Amherst.

VICE PRESIDENTS,

Hon. LEVI STOCKBRIDGE, Hadley. | CHESTER SMITH, Hadley.
Doct. N. G. TROW, Sunderland. | TIMOTHY PUTNAM, Leverett.
PARK WARNER, Granby.

SECRETARY AND TREASURER,

MIRICK N. SPEAR, of Amherst.

EXECUTIVE COMMITTEE,

E. F. COOK, Amherst. | LEVI P. WARNER, Sunderland.
OLIVER WATSON, Amherst. | ROYAL M MONTAGUE, Hadley.
CHAS. H. FIELD, Leverett. | Rev. JOHN JONES, Pelham.
L. V. B. COOK, Belchertown.

AUDITOR,

C. N. WEBSTER, of Amherst.

DELEGATE TO THE STATE BOARD OF AGRICULTURE,

LEVI STOCKBRIDGE, of Hadley.

LIFE MEMBERS

OF THE

Hampshire Agricultural Society.

HONORARY LIFE MEMBERS.

Hon. A. H. Bullock, of Worcester.
Hon. C. C. Chaffee, of Springfield.
Hon. George T. Davis, of Greenfield.
Hon. Edward Dickinson, of Amherst.
Charles L. Flint, Esq., of Boston.
Prof. Wm. C. Fowler, of Durham, Conn.
W. C. Goldthwait, Esq., Longmeadow.
Rev. F. D. Huntington, D.D., Boston.
Z. C. Montague, Esq., of Amherst.
Hon J. Y. Smith, of Providence, R. I.
Hon. M. P. Wilder, of Dorchester.
Hon. Henry F. French, of Amherst. 12

AMHERST.

Adams, Asa
Adams, Mrs. Asa
Adams, Charles
Adams, Mrs. Charles
Adams, John S.
Adams, Mrs. John S.
Adams, John Q.
Ainsworth, Foraester
Albee, John E.
Aldrich, Charles P.
Allen, Mrs. Hiram H.
Allen, Lysander H.
Allen, M Adams
Ayers, Elijah
Ayers, Mrs. Elijah
Albee, Mrs. Lydia
Allen, James W.
Aldrich, Nehamiah W.
Allen, Benj. B.
Baker, Alfred
Baker, Mrs. Alfred
Baker, Enos
Baker, George
Baker, Mrs. George
Baker, Joel
Bangs, Charles H.
Bangs, Danforth K.
Bangs, Mrs. Danforth K.
Barnard, Alvin
Barnard, Mrs. Alvin
Bartlett, Mrs. David
Bartlett, Moses S.
Bartlett, Lewis A.
Barrows, William
Belden, Horace
Belden, Timothy C.
Billings, Warren S.
Blanchard, Horace
Bogue, Mrs. Elisha
Boltwood, Lucius
Boltwood, Hon. L. M.
Boltwood, William
Boltwood, Mrs. William
Braley, John
Bridgman, Guilford
Bridgman, Miss Mary S.
Briggs, Ebenezer
Briggs, Mrs. Ebenezer
Burnham, George
Burnham, Mrs. George
Bliss, Zenas W.
Carter, Samuel C.
Carter, Mrs. Samuel C.
Chapin, Otis H.
Church, Elihu S.
Church, Mrs. E. S.
Church, Spencer
Clapp, Oliver M.
Clark, Simeon
Clark, Mrs. Simeon
Clark, Prof. William S.
Clark, Mrs. William S.
Cobb, Henry
Cobb, Mrs. Henry
Conkey, Ithamar F.
Conkey, Mrs. Ithamar F.
Conkey, Miss Jennie C.
Conkey, Edward
Conkey, Miss Kate
Conkey, William
Converse, Daniel
Converse, Mrs. Daniel
Cook, David S.
Cook, Mrs. David S.
Cook, Enos F.
Cook, Mrs. Enos F.
Cook, Rev. George
Cook, Mrs. George
Cooley, Allen
Cooley Moses D.
Cooley, Samuel Dexter
Cowles, Chester
Cowles, Mrs. Chester
Cowles, Clinton J.

Cowles, Mrs. Clinton J.
Cowles, Enoch
Cowles, Mrs. Enoch
Cowles, Erastus
Cowles, James
Cowles, Mrs James
Cowles, Mrs. Jonathan
Cowles, Jr., Jonathan
Cowles, Jr., Mrs. Jona.
Cowles, Levi D.
Cowles, Mrs. Levi D.
Cowles, Moses
Cowels, Mrs. Moses
Cowles, Ransom
Cowles, Mrs. Ransom
Cowles, Mrs. Submit
Curtis, Oliver H.
Curtis, Mrs. Oliver H.
Cushman, Avery R.
Cushman, Mrs. Avery R.
Cushman, Ephraim
Cushman, Jr., Ephraim
Cushman, Jr., Mrs. E.
Cushman, John R.
Cushman, Mrs. John R.
Cushman, Sanford C.
Cushman, Mrs. S. C.
Cutler, E. Pomeroy
Cutler, Miss Esther
Cutler, George
Cutler, Mrs. George
Cutler, William
Cutler, Mrs. Samuel F.
Clapp, Miss Hattie
Chittenden, Mrs. Erastus
Crosier, Mrs. James.
Clark, Mrs Stilman D.
Dana, Joseph
Dana, Joseph D.
Darling, Benjamin R.
Deuel, Charles
Deuel, Mrs. Charles
Dexter, David
Dickinson, Asa
Dickinson, Bela U.
Dickinson, Miss Charlotte
Dickinson, Charles
Dickinson, Daniel
Dickinson, Mrs. Daniel
Dickinson, Mrs. Edward
Dickinson, Miss Emily E.
Dickinson, Enos
Dickinson, Mrs. Enos
Dickinson, Enos 2d
Dickinson, Mrs. Enos 2d
Dickinson, Joseph
Dickinson, Josiah
Dickinson, Miss L. N.
Dickinson, Miss Lovina
Dickinson, Miss Lydia
Dickinson, Marquis F.
Dickinson, Mrs. M. F.
Dickinson, Moses B.
Dickinson, Mrs. Moses B.
Dickinson, Mrs. Oliver
Dickinson, Porter
Dickinson, Samuel S.
Dickinson, Mrs. Samuel S.
Dickinson, Miss Sarah M.
Dickinson, Waitstill
Dickinson, Mrs. Waitstill.
Dickinson, William
Dickinson, William A.
Dickinson, Mrs. Wm A.
Dickinson, William E.
Dickinson, William W.
Dickinson, Mrs. Mary
Dutton, Alonzo
Dutton, Mrs. Alonzo
Eastman, Austin
Eastman, Mrs. Austin
Eastman, Mrs. Baxter
Eastman, Solomon K.
Eastman, Chas. A.
Eastman, Mrs. Chas. A.
Eastman, George H.
Emerson, Mrs. Sarah E.
Edwards, Simeon
Ferry, Miss Sarah P.
Fish, Cummings
Fish, Mrs. Seth
French, Miss Mary
Field, Edwin G.
Field, Mrs Edwin G.
Gallond, George B.
Gaskill, Chester
Gates, Lansford
Gaylord, Flavel
Gaylord, Mrs. William
Graves, George
Gray, Joseph P.
Gray, Mrs. Joseph P.
Gunn, Lyman
Goodale, Lewis
Hall, Mrs. John B.
Harlow, Nathaniel L.
Hastings, Edmund
Hastings, Mrs. Edmund
Hastings, James
Hastings, Mrs. James
Hastings, Joseph C.
Hastings, Mrs. Joseph C.
Hastings, Mrs. Thomas
Haskins, John H.
Haskins, Mrs. John H.
Haskins, Henry W.
Haskins, Mrs. Harriet C.
Hawley, Charles M.
Hawley, Harrison,
Hawley, Justin
Hawley, Stetson
Hayward, Charles F.
Hayward, Mrs. Chas. F.
Hills, Henry F.
Hills, Leonard M.
Hills, Mrs. L. M.
Hills, Liberty
Hills, Samuel
Hills, Samuel T.
Hills, Mrs Samuel T.
Hills, Dwight L.
Hitchcock, Prof. Edward
Hitchcock, Mrs. Edward
Hobart, Edmund
Hobart, Mrs. Edmund
Hobart, George W.
Hobart, Mrs. George W.
Hobart, Jeremiah W.
Hobart Joshua
Hobart, Stillman
Hobart, Mrs Stillman
Howard, M W.
Howard, Mrs. M. W.
Howard, Roswell H.
Howland, Warren S.
Howland, Mrs W S.
Hubbard, Ethan D.
Hubbard, Mrs. Ethan D.
Hubbard, Hon. R. B.
Hubbard, Mrs. R B.
Hutchinson, Charles E.
Hoyard, Mrs. Sarah A.
Henderson, Hon Horace
Henderson, Alpheus R.
Henderson, Mrs. A. R.
Hunt, Wm W.
Howard, Mrs. H. C.
Ingram, Ezra
Ingram, Harrison
Ingram, Mrs. Harrison
Ingram, Rufus
Ingram, Lucius
Ingham, Thomas
Jackson, Henry
Johnson, Earl
Johnson, Mrs. Earl
Johnson, Orrin
Jones, Mrs Mary
Joy, Horatio N.
Kellogg, Eleazer
Kellogg, James
Kellogg, Lyman
Kellogg, Mrs. Lyman
Kellogg, Willard
Kellogg, Willard M.
Kellogg, Mrs. W M.
Kellogg, Mrs. William
Kenfield, Charles S.
Kenfield, Mrs. Chas. S.
Kellogg, Henry C.
Leland, Mrs. John
Lincoln, R. S.
Lincoln, Mrs. R. S.
Loomis, Austin D.
Lovett, Edward B.
Leach, B. F.

Lovell, John L.
Lovell, Mrs. John L.
Lewis, Hattie E.
Marsh, Henry A.
Marsh, Mrs. H. A.
Marshall, Ansel C.
Marshall, Mrs. Ansel C.
Mather, Mrs William E.
Mayo, Mrs. Noah
McCloud, Milton
McCloud, Mrs. Milton
McMaster, Charles
McMaster, Mrs. Charles
Merrick, James E.
Merrick, Mrs. James E.
Merrick, Rev. James L.
Merrill, Calvin
Merrill, Mrs. Calvin
Merrill, Miss Harriet O.
Mosman, Abner A.
Munsell, Guy C.
Munsell, Mrs Guy C.
Nash, Mrs. Charles
Nash, Henry C.
Nash, Mrs Henry C.
Nash, Luther
Needham, Emory H.
Needham, Mrs. E H.
Nelson, Miss Julia C.
Nims, Seth
Olney, Mrs. Almira
Palmer, Dwight W.
Palmer, Mrs. Dwight W
Palmer, Miss Sabra D.
Palmer, Frederick A.
Palmer, Mrs. F. A.
Pomeroy, David
Pomeroy, Mrs David
Pomeroy, Lorenzo H.
Pomeroy, Mrs. L. H.
Potwine, Thomas
Roberts, Reuben Jr.
Reed, Thomas
Reed, Mrs. Thomas
Rich, Alpheus
Roberts, Mrs. Fanny H.
Robbins, Alva
Robinson, Ferdinand
Robinson, Mrs. F.
Russell, Emerson
Russell, Mrs. Emerson
Smith, John W.
Smith, Mrs. John W.
Stratton, R. W.
Stratton, Mrs. R. W.
Sisson, John
Sisson, Lucius W.
Sisson, Taber T.
Shepard, Prof. Chas. U.
Skinner, J. L.
Smith, Mrs. B. F.
Smith, Samuel D.
Smith, Timothy
Smith, Mrs. Timothy
Smith, William B.
Smith, Mrs. William B.
Smith, William W.
Snell, Prof. E. S.
Snell, Mrs. E. S.
Spaulding, Philip D.
Spaulding, Mrs. Philip D.
Spear, Ebenezer P.
Spear, Lyscom
Spear, Mrs. Lyscom
Spear, Mirick N.
Stanley, Edward A,
Stearns, William A. D.D.
Stratton, Dr. Chester
Stratton, Mrs Chester
Sweetser, Luke
Sweetser, Mrs. Luke
Thayer, Charles E.
Turner, Mrs. E. G.
Temple, Dr. Theron
Taylor, Dr. Israel H.
Taylor, Mrs. Israel H.
Thayer, Jason
Thayer, Mrs. Jason
Thayer, Reuben
Thayer, Mrs. Reuben
Thurston, Stillman
Tuckerman, Prof. Edward
Tuckerman, Mrs. Edward
Turner, Rodolphus
Tyler, Prof. William S.
Tyler, Mrs. William S.
Whitney, Miss Hattie
Whitney, Mrs. S. W.
Wiley, Miss Dolly T.
Ward, Horace
Ward, Mrs. Horace
Warner, Aaron, D. D.
Warner, David S.
Warner, George
Watson, Oliver
Watson, Mrs. Oliver
Webster, Charles N.
Westcott, Jared T.
White, John C.
White, Mrs. John C.
White, Martin
Whipple, George A.
Whitney, Simon W.
Wiley, John
Wiley, Mrs. John
Williams, Enos D.
Williams, Mrs Enos D.
Williams, Frederick
William Lucas
Williams, Orrin
Williams, Mrs. Orrin
Woodworth Rev. C. L.
Woodworth, Mrs. C. L.
Wright, Sylvanus M.—391

ATHOL.—Putnam, Rufus. Putnam, Mrs Rufus. Horr, Geo. W. Horr, Mrs. Geo.—4.
BALTIMORE. Md.—Brown, Smith. Wheelock, Dana—2
BERNARDSTON.—Slate, Jonathan S.—1
BOSTON.—Smith, Alvan. Wetherell, Leander. Shaw, George L. Howe, Geo.—3

BELCHERTOWN.

Alden, Thomas
Barrett, Leonard
Bridgeman, Phineas
Chandler, George
Chandler, Mrs George
Chandler, Henry J.
Clark, Norman P.
Clark, Mrs N P.
Cowles, Samuel D.
Cook, L. V. B.
Dickinson, Samuel
Dunbar, Charles T.
Dwight, Nathaniel
Goodale, Asahel
Goodale, Rufus
Graves, Mrs. Wm.
Hall, Levi B.
Hannum, George O.
Hannum, Lyman W.
Hannum, Mrs. L W.
Holland, Mrs. Luther
Montague, Ephraim
Packard, Joel
Perkins, Samuel G.
Russell, Francis H.
Sabin, Lyman
Thayer, Morris
Thayer, Manser R.
Thayer, Mrs. Rufus
Thayer, Savannah A.
Thayer, Mrs S A.
Thayer, William
Thompson, Dr. George F.
Walker, Emory P.
Webster, Jonathan
Wilson, Asa
Wiley, Otis—38

BRIGHTON.—Clark. Rev. Sereno D. Clark, Mrs. Sereno D.—2

CHICAGO.

Boyden, Hon. J. W.	Haven, Joseph D.D.	Pierce, Francis A.
Dickinson, William P.	Haven, Mrs. Joseph	Tapley, George W.
Dickinson, Mrs. P.	Hubbard, Orton	Payson, Joseph K.—9

CLINTON, N. Y.—Swift, Rev. E. Y. Swift, Mrs. E. Y.—2
COVENTRY, Vt.—White, Rev. Pliny H.—1
COLERAINE.—Sprague, Joseph G.—1

DEERFIELD.

Ely, John D.	Mosher, Chas.	Stebbins, Moses
Fogg, Josiah	Stebbins, Benjamin Z.	Stebbins, Mrs. Moses—8
Rust, Horatio N.	Stebbins, Evander G.	

EASTHAMPTON

Colton, Rev. A. M.	Matthews, Horace	Sabin, Mrs. Sherman
Colton, Mrs. A. M.	Sabin, Sherman	Williston, Hon. Samuel—6

ENFIELD.

Abbott, Frederick	Kimball, C. H.	Shearer, Lyman F.
Ballou, Hiram	Moody, Augustus	Smith, Edward P.
Blodgett, David	Potter, Lyman D.	Smith, Henry M.
Fobes, Henry	Randall, Alvan	Woods, Cyrus F.
Gillett, Daniel B.	Randall, Ozias	Woods, Hon. Josiah B.
Howe, Joseph J.	Root, Joseph	Woods, Rufus D.—18

ERVING.—Stone, J. E.—1
FREDOM, Pa.—Howe, A. P. Howe, Mrs. A. P. Howe, Doct. H. A.—3

GRANBY.

Aldrich, Christopher C.	Ferry, Charles S.	Smith, Jared C.
Ayers, Rodney	Ferry, Lucius	Smith, Nelson
Barton, James M.	Lyman, David	Smith, Jr., Samuel
Barton, Phinehas D.	Lyman, George J.	Smith, Jr., Mrs. Samuel
Chapin, Philo	Montague, Giles F.	Smith, William A.
Clark, Augustus	Montague, Holland	Stanley, Henry F.
Clark, Charles F.	Nash, Lorenzo S.	Stebbins, Cyrus
Clark, Spencer	Patrick, William J.	Taylor, Milo A.
Dickinson, Samuel B.	Preston, John H. D.	Warner, Alonzo
Eastman, Samuel F.	Richardson, Orsemus	Warner, Park
Eastman, Mrs. Samuel F.	Smith, George N.	Witt, Horace

Woodford, William H. Ingram, Robert—35

GRANBY, Conn.—Gaylord, Ebenezer. Gaylord, Mrs. Ebenezer—3
GRAND RAPIDS, Mich.—Cutler, Robert. Cutler, Mrs. Robert—2
GREENFIELD, N. H.—Downes, Almeron S.—1.

GREENWICH.

Carter, John	Douglas, Stephen	Warren, Samuel M.—3

HADLEY.

Adams Benjamin	Ashcraft, John O.	Carter, Benjamin T.
Adams, Mrs. Benjamin	Beaman, Jonas	Chapin, Edwin
Adams. Levi	Bonney, Dr. Franklin	Clark, John
Adams, Mrs. Levi	Bonney, Oliver E.	Clemons, Mrs. Horace

Comins, Simon F.
Cowles, Daniel
Cowles, Mrs. Daniel
Cowles, David S.
Cowles, Mrs. David S.
Cowles, Elijah
Cowles, Mrs. Elijah
Cowles, Lewis
Cowles, Mrs. Lewis
Cowles John S.
Comins, H. C.
Comins, Mrs. H. C.
Comins, Mrs. Ellen
Dickinson, Alphonzo
Dickinson, Mrs. A.
Dickinson, Caleb D.
Dickinson, Elihu S.
Dickinson, George
Dwight, Rev. E. S.
Dwight, Mrs. E. S.
Granger, Lorenzo N.
Granger, Mrs. L. N.
Gray, Amos
Gray, Chester
Green, Dorus
Green, Henry
Green, Linus
Green, Mrs. Linus
Hibbard, Mrs. Willard
Hawley, F. A.
Hawley, Warren F.
Hayward, E. E.
Hibbard, Edward P.
Hibbard, Samuel S.
Hibbard, Willard
Hill, Roderic B.
Hooker, Benjamin
Huntington, Theodore G.
Huntington, Mrs. T. G.
Huntington, Mrs. T. P.
Hurd, Horatio C.
Ingram, Z. E.
Kellogg, J. C.
Kellogg, Benj. A.
Kellogg, Mrs. Martin
Kellogg, Stillman
Kellogg, Mrs. Stillman
Kentfield, J. B.
Kentfield, Mrs. J. B.
Lamson, Charles E.
Lawrence, Hubbard
Marsh, Henry M.
Marsh, Timothy S.
Montague, Royal M.
Morton, John A.
Morton, Mrs. John A.
Newton, Walter
Nash, John W.
Nash, Mrs. Samuel
Newton, William
Newton, Mrs. William
Pasco, Theodore
Pasco, Mrs. Theodore
Porter, Edwards J.
Porter, Eleazer
Powers, Alfred
Powers, Mrs. Alfred
Russell, Horace
Russell, Mrs. Horace
Russell, John
Russell, Mrs. John
Russell, Samuel
Richardson, H. L.
Scott, Mrs. Rufus
Shattuck, Joseph H.
Shipman, William S.
Smith, Charles
Smith, Charles H.
Smith, George C.
Smith, Mrs. George C.
Smith, Chester
Smith, Mrs. Cotton
Smith, Edmund
Smith, Enos D.
Smith, Mrs. Enos D.
Smith, Erastus
Smith, Francis
Smith, Giles E.
Smith, Jeriah S.
Smith, Hon. Joseph
Smith, Mrs. Joseph
Smith, Oliver E.
Smith, Roswell 2d
Smith, Mrs. Roswell 2d
Smith, Thaddeus
Smith, Mrs. Thaddeus
Stockbridge, Levi
Stockbridge, Mrs. Levi
Tower, Samuel
Tuxbury, Rev. Franklin
Tuxbury, Mrs. Franklin
Wallis, Addi
White, David
White, Moses
Warner, William P.
West, Parsons
West, Mrs. Parsons
White, David
White, Moses
Wood, George A.
White, Samuel G.
Williams, P. Smith.
Williams, Mrs. P. Smith.
Wilder, Samuel C.—126

HARTFORD, Ct.—Faxon, William. Fuller, Walter—2

HATFIELD.—Hubbard, George W. Porter, Henry S.—2

HOLYOKE.—Dickinson, Edward—1

IOWA.—Strickland, William G. Strickland, Mrs. Wm. G.—2

KEENE, N. H.—Sprague, Joseph G.—1

KEY WEST, Fla.—Allen, Benj. W.

LEVERETT.

Adams, Alden
Ashley, Marvin
Ashley, Mrs. Marvin
Ball, Orus
Ball, Mrs. Orus
Ball, Silas
Bangs, Howard
Boutwell, Levi
Boutwell, Mrs. Levi
Boutwell, Samuel W.
Boutwell, Mrs. S. W.
Clark, William Wells
Cutter, Mrs. Seneca
Dunklee, Hezekiah
Field, Abner
Field, Mrs. Abner
Field, Alden C.
Field, Mrs. Alden C.
Field, Asa L.
Field, Mrs. Asa L.
Field, Charles H.
Field, Mrs. Charles H.
Field, Harrison
Field, Harrison O.
Field, Mrs. H. O.
Field, Moses
Field, Mrs. Moses
Field, Zebina
Field, Carrie M.
Fitts, Nathan H.
Graves, Elmer
Gilbert, L. A.
Graves, Kellogg
Hobart, Baxter R.
Hobart, Mrs. Baxter R.
Hobart, Charles D.
Hobart, Colburn
Hobart, Peter
Hobart, Spencer

Howard, Baxter	Lock, Ezekiel	Rice, Mrs. David
Hubbard, George	Lock, Mrs. Ezekiel	Strong, Mrs. A. A.
Hubbard, Roswell	Moore, Dexter	Smead, Mrs. S. S.
Ingram, Elijah	Nutting, Lucius	Smith, William H.
Ingram, Elisha	Nutting, Ransom	Smith, Mrs. William H.
Jones, Edward	Porter, Cephas	Taylor, William
Kimball, David	Putnam, Timothy	Willis, Lawson S.
Leach, Chester	Putnam, Mrs. Timothy	Wood, Ira
Leach, Mrs. Chester	Rice, Josiah	Wood, Mrs. Ira
Leach, Humphrey S.	Rice, Mrs. Josiah	Wood, Seth
Leach, Mrs. H. S.	Rice, Dr. David	Woodbury, Mrs. Jason H

Woodbury, Jason H.—73

LOCKPORT, N. Y.—Sears, Simon—1

LODA, Ill.—Hunt, James—1

LYNN.—Fuller, S. B.—1

MINNESOTA.

Farrar, Mrs. George H.	Nutting, Truman	Nutting, Mrs. Truman—3

MASON VILLAGE, N. H.—Fisher, Rev. George E.—1

MELROSE, Pa.—Guernsey, Mrs. Martha—1

MOUNT PALATINE, Ill.—Wright, Abram—1

MONTAGUE.

Boutwell, William H.	Paine, Mrs. Orrin	Russell, Mrs. Calvin
Paine, Alonzo	Russell, Calvin	Smith, Charles H.

Spaulding, Jr., Peter—7

NEW SALEM.

Dean, Richard	Eastman, Mrs. David	Hunt, Horace
Eastman, Rev. David	Haskins, Nelson	Powers, Samuel

Powers, Mrs. Samuel—7

NEW YORK CITY.

Ford, Mrs. Emily	Nash, Rev. John A.	West, Joseph J.
Harrington, Samuel	Nash, Mrs. John A.	Woodman, Dr. George S.
Harrington, Mrs. S.	Shipman, Jr., John	Woodman, Mrs. G. S.—11
Hawks, Charles K.	Smith, Rev. Prof. H. B.	

NORTHAMPTON.

Baker, Hon. Osymn	Hinckley, Samuel L.	Strong, Ebenezer
Barrett Dr. Benjamin,	Hillyer, Winthrop	Strong, Elisha
Chamberlin, Dr. C. N.	Kirkland, Harvey	Strong, William
Childs, Paris	Lewis, Lucius	Thayer, Justin
Clapp, D. M.	Parsons, Charles T.	Trumbull, James R.
Clark, William	Parsons, Samuel L.	Trumbull, Mrs. J. R.
Clark, Jr., William	*Shepard, Ashur	*Washburn, Luther I.
Dickinson, George P.	Shepard, Henry	Wells, Samuel
Fitts, Elijah B.	Smith, S. M.	Wright, Ansel—27

NORTHFIELD.—Brown, Charles T. Brown, Mrs. Charles T.—2

OSKOSH, Wis.

Kellogg, Ansel	Kellogg, William	Russell, Chauncey R.—3

OTISCO, N. Y.—Clark, Luke M.—1

OREGON.—Warren, James R

PELHAM.

Aldrich, Tyler D.	Eaton, Calvin D.	Newell, Lemuel A.
Ballou, Emory	Fales, Abijah	Newell, Mrs. L. A.
Boyden, Sanford	Fales, Daniel	Newell, Miss Mary A.
Buffum, Thomas	Gates, Asahel	Rankin, Ansel A.
Chapin, Philo	Gray, Horace	Rankin, Mrs. Ansel A.
Cadwell, Aretus J.	Gray, Mrs. Horace	Russell, John
Cadwell, Mrs A. J.	Jewett, Sylvester	Shaw, Jr., John
Cook, Nathaniel	Jewett, Mrs. Sylvester	Thompson, E. C.
Cook, Mrs. N.	Jones. Rev. John	Ward, Joseph G.—29
Cook, Olney	Kieth, A. C.	

PALMER.—Field, Erastus S. Reed, James. Shaw, E. B. Stever, Col. Jacob
Chapman, Mrs. Mary

PHILADELPHIA, Pa.—Arnold, W. A. Wilson, John W. Montague, Albert—3

PITTSFIELD.—Frink, Henry. Frink, Mrs. Henry—2

PRESCOTT.—Paige, Christopher. Paige, Benjamin K.—2

PROVIDENCE, R. I.—Leonard, Dexter M.—1

ROCKFORD, Ill.—Bartlett, Mrs. Harvey—

ROSEMOND, Ill.—Smith, Brainard. Smith, Mrs. Brainard—2

SALEM —Jewett, Rev. George B.—1

SARATOGA, N. Y.—Crapo, Mrs. Asubah—1

SHARON, Ill.—Godfrey, William B.—1

SOUTHAMPTON.—Edwards, Elisha—1

SHUTESBURY.

Adams, S. Ward	Dudley, Mrs. Samuel F.	Newell, Samuel A.
Bartlett, Moses	Fitts, Edward	Shores, David—8
Dudley, Samuel F.	Howe, Abraham S.	

SOUTH HADLEY.

Allen, Levi W.	Kellogg, Amos	Preston, Joseph S.
Alvord, Hervey	Lathrop, Paoli	Smith, Edward L.
Bates, Emerson	Lathrop, Mrs. Paoli	Smith, Gilbert A.
Clark, Marcellus	Lyman, Lorenzo W.	Smith, Mrs. Gilbert A.
Cogswell, Milton B.	Lyman, Mrs. L W.	Smith, Henry N.
Gaylord, Lorenzo	Montague, C. Newton	Smith, Jason
Judd, Andrew T.	Montague, Elliot	Smith, Mrs. Jason
Judd, Edward H.	Moody, Alvan	Smith, Philip
Judd, Edwim H.	Moody, Hovey	Snow, Mrs. Sheldon—29
Judd, Watson S.	Nash, Thomas M.	

SUNDERLAND.

Bowman, William	Crocker, Zaccheus	Graves, Mrs. Marvin
Bowman, Mrs. Wm.	Darling, B. C.	Graves, Timothy
Brown, Joshua T.	Darling, Mrs. B. C.	Graves, Mrs. Timothy
Brown, Sylvester	Delano, A. C.	Gunn, Issac S. H.
Brown, Mrs. Sylvester	Delano, Mrs. A. C.	Hemenway, Mrs. B. C.
Childs, Israel	Dickinson, E. P.	Hobart, Albert
Childs, Mrs. Israel	Dickinson, Mrs. E. P.	Hobart, Mrs. Albert
Chittenden, L. O.	Dickinson, Mrs. R.	Hubbard, Alanson
Chittenden, Mrs. L. O.	Dunklee, B. F.	Hubbard, Mrs. A.
Clark, Mrs. Austin L.	Dunlap, Samuel	Hubbard, Mrs. Ashley
Cooley, Charles	Dunlap, Mrs. Samuel	Hubbard, Avery D.
Cooley, Mrs. Charles	Field, Erastus S.	Hubbard, Mrs. A. D.
Cooley George	Gaylord, William	Hubbard, Claudius B.
Crocker, Daniel B.	Graves, Alden	Hubbard, Mrs. C. B.
Crocker, Stoughton D.	Graves, George W.	Hubbard, David
Crocker, Mrs. S. D.	Graves, Mrs. Hubbard	Hubbard, Mrs. D.

Hubbard, Kelita
Hubbard, Martin L.
Hubbard, Mrs. M. L.
Hubbard, Moses 2d
Hubbard, Mrs. M. 2d
Hubbard, Parker D.
Hunt, Melzar
Hunt, William
Hunt, Mrs. William
Hunt, Zebina
Hunt, Mrs. Zebina
Lyman, Hon. Horace
Montague, John
Montague, Mrs. John
Montague, Warren
Montague, Mrs. W.
Newton, Lyman A.
Parmenter, Miss Alathea
Pomeroy, William D.
Prouty, James B.
Richards, Perrin N.
Richards, Mrs. P. N.
Robinson, E. E.
Robinson, Mrs. E. E.
Robinson, John R.
Rowe, Appleton E.
Rowe, Mrs. A. E.
Russell, Emmons
Russell, Mrs. Emmons
Russell, J. Wiley
Russell, Mrs. J. W.
Russell, William W.
Russell, Mrs. Wm. W.
Sanderson, Eli
Smith, Austin
Smith, Mrs. Austin
Smith, Elihu
Smith, Mrs. Elihu
Smith, John M.
Smith, Mrs. John M.
Smith John R.
Smith, Nathaniel
Smith, Mrs. Nathaniel
Smith, Austin N.
Smith, Mrs. A. N.
Taft, Horace W.
Trow, Dr. N. G.
Trow, Mrs. N. G.
Warner, Levi P.
Warner, Mrs. L. P.
Warner, Wallace R.
Whittemore, D.D.
Wiley, Ebenezer
Wiley, Mrs. Ebenezer
William, Franklin H.
Williams, Henry O.
Williams, Mrs. H. O.
Williams, Oliver—106

SPRINGFIELD.

Briggs, J. L.
Crouch, J. S.
Gunn, Wm. F.
Gunn, Mrs. Wm. F.
Hubbard, Caleb, T.
Montague, Isaac W.
Wildes, Ansel F.
Young, J. J.—8

TAUNTON.—Sandford, Rev. John. Sandford, Mrs. John—2

UXBRIDGE.—Fitch, Dr. Newton. Fitch, Mrs. Newton—2

WARE.

Bowen, Sylvester
Brakenridge, Hon. W. S.
Devens, Arthur L.
Devens, Mrs. A. L.
DeWitt, Francis
Gilbert, George H.
Gilbert, Mrs. G. H.
Phelps, Samuel H.
Rice, Joel
Richards, F. D.
Sage, Orrin
Stevens, Charles A.—12

WENDELL.—Ballard, Daniel. Whittaker, A. G.—2

WESTBORO.—White, Samuel N. White, Mrs. S. N.—2

WILLIAMSBURG.—Bartlett, Newman W. Graves, Levi N.—2

WILMINGTON, Vt.—Smith, Dr. N. W. Smith, Mrs. N. W.—2

WORCESTER.—Cummings, Rev. E. A.—Cummings, Mrs. E. A.—2

WHATELY.—Graves, C. A. Ludden, Parmenus

WEST BROOKFIELD.—Aiken, Benj. P.

Summary of Members.

Honorary Members,	12	Montague,	7
Amherst,	394	New Salem,	7
Athol,	4	New York City,	11
Baltimore, Md.,	2	Northampton,	27
Bernardston,	1	Northfield,	2
Boston	4	Oshkosh, Wis.,	3
Belchertown,	37	Otisco, N. Y.,	1
Brighton,	2	OREGON,	1
Chicago,	9	Pelham,	29
Clinton, N. Y.,	2	Palmer,	5
Coventry, Vt.,	1	Pittsfield,	2
Coleraine,	1	Prescott.	2
Deerfield,	8	Providence, R. I.,	1
Easthampton,	6	Rockford, Ill.,	1
Enfield,	18	Rosemond, Ill.,	2
Erving,	1	Salem,	1
Freedom, Pa.,	3	Saratoga, N. Y.,	1
Granby,	35	Sharon, Ill.,	1
Granby Ct.,	3	Southampton,	1
Grand Rapids, Mich.,	2	Shutesbury,	8
Greenfield, N. H.,	1	South Hadley,	29
Greenwich,	3	Sunderland,	106
Hadley,	126	Springfield,	8
Hartford, Ct.,	2	Taunton,	2
Hatfield,	2	Uxbridge,	2
Holyoke,	1	Ware,	12
IOWA,	2	Wendell,	2
Keene, N. H.,	1	Westboro,	2
Key West, Fla.,	1	Williamsburg,	2
Leverett,	73	Wilmington, Vt.,	2
Lockport, N. Y.,	1	Worcester,	2
Loda, Ill.,	1	Whately,	2
Mount Palatine,	1	West Brookfield,	1
Total,			1027

RULES.

All stock and other articles for exhibition must be entered in the name of the owners.

All horses must be driven for Exhibition as the Examining Committees may direct.

MILCH COWS. Each competitor at the time of entry, will file with the Secretary a certificate of the Cow's age and breed ; and a general statement of quantity and quality of milk and butter in any given period.

The correct pedigree of pure-bred animals must be given when the entry is made, in writing.

It is very desirable that specimens of the stock of each Stallion should be exhibited with the sire.

Competitors for premiums on crops will be furnished with blank statements by a committee, who will themselves ascertain the quantity of the crop.

All statements respecting crops for premium must be sent to the Secretary before November 15th, 1865.

In accordance with the custom of similar societies, only fifty per cent. of the above premiums will be paid when awarded to persons not members of the Hampshire Society, but all such are invited to become members.

Any male person may become a life-member by paying to the Treasurer the sum of five dollars, and any lady, by the payment of one half the amount.

All premiums not called for within six weeks after the same are awarded shall be paid into the treasury and be considered as presented to the Society.

In extraordinary cases Gratuities may be awarded by Committees in addition to the above premiums, but the payment of them will depend upon a vote of the Executive Committee. Whatever Books may be presented to the Society for the purpose will be awarded as gratuities.

No animal can receive more than one premium.

SEVENTEENTH

ANNUAL EXHIBITION

OF THE

HAMPSHIRE

AGRICULTURAL SOCIETY,

WILL BE HELD AT

HAMPSHIRE PARK,

AMHERST, MASS.,

Tuesday and Wednesday, Sept. 25 and 26, 1866.

Premiums and Committees.

The EXECUTIVE COMMITTEE of Hampshire Agricultural Society offer the following Premiums to competitors for the Seventeenth Annual Exhibition, and have appointed the following members of the Society, Committees on the several departments thereof:—

MOWING MACHINES.

For the best Mowing Machine, $10,00

Committee. Levi Adams, Hadley; O. Watson, Amherst; Stillman Kellogg, Hadley.

MECHANIC ARTS.

For all articles in this department will be awarded by the Examining Committee, 30,00

Committee. Samuel D. Cowles, Belchertown; Horace Gray, Pelham; E. Stevens Church, Amherst.

DOMESTIC AND OTHER MANUFACTURES.

For all articles in this department will be awarded by the Examining Committee, $35,00

Committee. George Burnham, Amherst; Alden C. Field, Leverett; Mrs. W. Conkey, Amherst; Mrs. Emmons Russell, Sunderland; Mrs. Enos D. Smith, Hadley.

FANCY ARTICLES.

For all articles in this department will be awarded by the Examining Committee, $50,00

Committee. George W. Allen, Amherst; Wm. Barrows, Amherst; Mrs. John Jones, Pelham; Mrs. George O. Hannum, Belchertown; Mrs. S. C. Wilder, Hadley.

MISCELLANEOUS.

BREAD.

For the best sample of Wheat Bread,	$2,00
For the next best,	1,00
For the next best,	50
For the best sample of Rye Bread,	2,00
For the next best,	1,00
For the next best,	50
For the best sample of Rye and Indian Bread,	2,00
For the next best,	1,00
For the next best,	50
For the best sample of Graham Bread,	2,00
For the next best,	1,00
For the next best,	50

Committee. Dr. N. G. Trow, Sunderland; Mrs. J. P. Gray, Amherst; Mrs. George Burnham, Amherst; Mrs. Calvin D. Eaton, Pelham; Mrs. Harrison O. Field, Leverett.

BUTTER.

For the best ten pounds,	$4,00
For the next best,	3,00
For the next best,	2,00
For the next best,	1,00

CHEESE.

For the best forty pounds,	$4,00
For the next best,	3,00
For the next best,	2,00
For the next best,	1,00

Committee. C. N. Webster, Amherst; Mrs. Stillman Kellogg, Hadley; Mrs. E. P. Spear, Amherst; Mrs. Wm. Newton, Hadley; Mrs. John B. Ward, Pelham.

HONEY.

For the best experiment in keeping Bees with the sample of Honey and written statement,	$2,00
For the next best,	1,00

WINES, JELLIES, CANNED FRUITS, AND PICKLES.

For all articles in this department will be awarded by the Examining Committee,	$8,00

Committee. Dr. David Rice, Leverett; Mrs. F. N. Granger, Hadley; Mrs. James Crosier, Amherst; Mrs. Rufus Thayer, Belchertown; Mrs. Ephriam E. Robinson, Sunderland.

COLLECTIONS OF FRUITS.

For the best collection of Fruits, regard being had to quantity, quality and variety,	$5,00
For the next best,	3,00
For the next best,	2,00
For the next best,	1,00

APPLES.

For the best collection, raised by the exhibitor,	$5,00
For the next best,	3,00
For the next best,	2,00
For the next best,	1,00
For the next best,	50

PEARS.

For the best collection, raised by the exhibitor,	$3,00
For the next best,	2,00
For the next best,	1,00

Committee. Hon. Levi Stockbridge, Hadley; Cummings. Fish, Amherst; Wm. H. Smith, Leverett; Spencer Hobart, Granby; Levi B. Hall, Belchertown.

CRANBERRIES.

For the best sample, 4 quarts,	$1,00
For the next best,	50

QUINCES.

For the best collection, raised by the exhibitor,	$2,00
For the next best,	1,00
For the next best,	50

GRAPES.

For the best collection, raised by the exhibitor,	$3,00
For the next best,	2,00
For the next best,	1,00

Committee. Dr. Franklin Bonney, Hadley; Charles Deuel, Amherst; Mrs. Loren Beals, Sunderland; Mrs. Lyman W. Hannum, Belchertown; Mrs. Wm. H. Smith, Leverett.

FLOWERS.

For the best collection, regard being had to number of species, size and beauty of specimens and arrangement,	$5,00
For the next best,	4,00
For the next best,	3,00
For the next best,	2,00
For the next best,	1,00
For the best collection of Wild Flowers,	1,00
For the best twelve DAHLIAS, regard being had to variety,	1,00

Committee. Prof. Richard H. Mather, Amherst; H. A. Marsh, Amherst; Miss Charlotte Phelps, Hadley; Mrs. Prof. Edward Hitchcock, Amherst; Mrs. Dr. N. G. Trow, Sunderland.

DRIED FRUIT.

For the best sample,	$2,00
For the next best,	1,00
For the next best,	50

Committee. Rev. J. Clisbe, Amherst; Mrs. Thomas Buffum, Pelham; Mrs. Moses Hubbard, Sunderland.

GARDEN VEGETABLES.

For the best collection, of not less than ten varieties, regard being had to quantity, quality and variety,	$3,00
For the next best,	2,00
For the next best,	1,00

Committee. Rev. John Jones, Pelham; Munroe Thayer, Belchertown; Elihu Smith, Sunderland.

SEEDS, GRAINS AND ROOTS.

For the best bushel of Barley,	$1,00
For the best bushel of Buckwheat,	1,00
" " " Carrots,	1,00
" " " Corn,	1,00
" " " English Turnips,	1,00
" " " Mangel Wurtzels,	1,00
" " " Millet,	1,00
" " " Oats,	1,00
" " " Onions,	1,00
" " " Parsnips,	1,00

For the best bushel of Flax Seed,	$1,00
" " " Potatoes,	1,00
" " " Rye,	1,00
" " " Swedish Turnips,	1,00
" " " Winter Wheat,	1,00
" " " Spring Wheat,	1,00
" " ten pounds of Clover Seed,	1,00
" " " " Carrot Seed,	1,00
" " " " Timothy Seed,	1,00
" " 100 " Winter Squashes,	1,00
" " collection, not less than twelve varieties of Garden Seeds,	1,00
For the best collection, not less than twelve varieties of Flower Seeds,	1,00
For the best sample of ears of Seed Corn,	1,00
" " " 10 lbs. Broom Brush,	1,00
" " " 2 lbs. Hops,	1,00
For the best collection of Fruits, Vegetable Flowers, Grains and Seeds, from any town or Farmers Club,	
1st premium,	5,00
2d "	4,00
3d "	3,00

Committee. S. C. Wilder, Hadley; Edmund Hobart, Amherst; Asahel, Gates, Pelham; Eliot Montague, South Hadley; Lyman Hannum, Belchertown.

CATTLE, SHEEP, SWINE AND POULTRY.

TOWN TEAMS.

For the longest string of Cattle of not less than thirty pairs,	$25,00
For the next longest string, of not less than fifteen pairs,	10,00
For the best string of Cattle, of not less than 10 pairs,	10,00

Committee. John A. Morton, Hadley; Flavel Gaylord, Amherst; Tyler D. Aldrich, Pelham.

WORKING OXEN.

For the best pair, five years old or more,	$5,00
For the next best,	4,00
For the next best,	2,00
For the next best,	1,00

For the best pair, four years old,	5,00
For the next best,	4,00
For the next best,	2,00
For the next best,	1,00

Committee. Hon. Horace Henderson, Amherst; Asa L. Field, Leverett; Willard M. Keilogg, Amherst; Phineas Bridgman, Belchertown; Josiah S. Smith, Hadley.

TRAINED OXEN AND STEERS.

For the best pair of trained Cattle,	$3,00
For the next best,	2,00
For the best pair of trained Steers not more than 2 years old, to be driven and managed by a boy not more than 14 years	
1st premium,	$2,00
2d "	1,00

Committee. Bela U. Dickinson, Amherst; James Fales, Pelham; Geo. O. Hannum Belchertown.

STEERS.

For the best pair, three years old,	$4,00
For the next best,	3,00
For the next best,	2,00
For the next best,	1,00
For the best pair, two years old,	3,00
For the next best,	2,00
For the next best,	1,00
For the next best,	50
For the best pair, one year old,	3,00
For the next best,	2,00
For the next best,	1,00
For the next best,	50

Committee. Lorenzo S. Nash, Granby; Lemuel H. Newell, Pelham; Howard Bangs, Leverett; James A. Baker, Amherst; Asa Wilson, Belchertown.

MILCH COWS.

For the best pure bred of any breed,	$5,00
For the next best,	3,00
For the best grade or native,	4,00
For the next best,	3,00
For the next best,	2,00

Committee. Hon. Henry French, Chester Smith, Philip D. Spaulding, Amherst; Sylvester Brown, Sunderland; Enos D. Smith, Hadley.

HEIFERS OF LESS THAN THREE YEARS.

For the best pure bred of any breed,	$4,00
For the next best,	2,00
For the next best grade or native,	3,00
For the next best,	2,00
For the next best,	1,00

Committee. Luke Sweetser, Amherst; John Clarke, North Hadley; Shirley Libby, Belchertown.

BULLS.

For the best Thoroughbred,	$10,00
For the next best, of any Breed,	8,00
For the next best,	5,00
For the next best,	3,00

Committee. John M. Smith, Sunderland; Benj. Adams Hadley; Oren Williams, Amherst.

CATTLE FOR THE STALL.

For the best pair,	$8,00
For the next best,	5,00
For the next best,	3,00
For the next best,	1,00

FAT CATTLE.

For the best pair,	$8,00
For the next best,	5,00

Committee. Gen. Parsons West, Hadley; Ansel C. Marshall, Amherst; Lorenzo W. Lyman, South Hadley; Thaddeus Smith, Hadley; Thomas Buffum, Pelham.

CALVES.

For the best herd, not less than five,	$5,00
For the next best,	3,00
For the best pair of Steers,	2,00
For the next best,	1,00
For the best Bull Calf,	3,00
For the next best,	1,00
For the best Heifer Calf,	2,00
For the next best,	1,00

Committee. Simon F. Comins, Hadley; John C. White, Amherst; John O. Aschraft, Hadley.

SWINE.

For the best Boar,	$4,00
For the next best,	3,00
For the next best,	1,00
For the best Sow with Pigs,	4,00
For the next best,	3,00
For the next best,	1,00
For the best weaned pigs not less than 4 months old,	3,00
For the next best,	2,00

Committee. E. P. Cutler, Olney Gaylord, Amherst; E. P. Dickinson, Sunderland.

POULTRY.

For the best Cock and six Hens,	$2,00
For the next best,	1,00
For the next best,	50
For the best pair of Turkeys,	2,00
For the next best,	1,00
For the next best,	50
For the largest number of Domestic Fowls,	3,00

Committee. Willard Kellogg, Amherst; Willie Crocker, Sunderland; Geo. Jones, Pelham; Willie Kingman, Amherst; Charles Adams, Hadley; Morton Thayer, Belchertown; Charles M. Field, Leverett.

SHEEP.

For the best Buck,	$4,00
For the next best,	3,00
For the next best,	2,00
For the best lot Ewes, not less than six,	5,00
For the next best,	3,00
For the best lot Lambs, not less than 6,	3,00
For the next best,	2,00
For the next best,	1,00

Committee. N. Austin Smith, Sunderland; Sylvester Jewett, Pelham; Cephas Porter, Leverett.

MISCELLANEOUS STOCK.

Premiums will be awarded on Miscellaneous Stock to the amount of $12,00

Committee. Col. Samuel F. Dudley, Shutesbury; E. D. Hubbard, Amherst; Horace Russell, Hadley.

STALLIONS.

For the best Stallion,	$10,00
For the next best,	8,00
For the next best,	6,00

Committee. Wm. W. Russell, Sunderland; Joseph P. Gray, Amherst, John W Nash, Hadley.

BREEDING MARES WITH SUCKING COLTS.

For the best Breeding Mare,	$5,00
For the next best,	4,00
For the next best,	3,00
For the next best,	2,00
For the next best,	1,00

Committee. Harrison Field, Leverett; Edward Boltwood, Amherst; Geo. B. Smith, Hadley; Ebenezer Wiley, Sunderland; Wm. Thayer, Belchertown.

COLTS AND FILLIES.

For the best three year old Stallion,	$5,00
For the best three year old Gelding or Filly,	4,00
For the next best Colt or Filly,	3,00
For the next best,	2,00
For the best two year Colt or Filly,	3,00
For the next best,	2,00
For the next best,	1,00
For the best yearling Colt or Filly,	3,00
For the next best,	2,00
For the next best,	1,00

Committee. Guy C. Munsell, S. R. Crosby, Amherst; Bradford M. Field, Leverett.

FARM HORSES.

For the best pair of Farm Horses,	$8,00
For the next best,	5,00
For the next best,	3,00
For the best pair of Mules,	5,00

SINGLE FARM HORSES.

For the best Single Farm Horse,	$5,00
For the next best,	4,00
For the next best,	3,00

Committee. Hinkley Thayer, Hadley; Harrison Ingram, Charles R. Dickinson, Amherst; L. V. B. Cook, Belchertown; Joseph G. Ward, Pelham.

CARRIAGE HORSES.

For the best pair of Carriage Horses,	8,00
For the next best,	5,00
For the next best,	3,00
For the best Single Carriage Horse,	6,00
For the next best,	5,00
For the next best,	4,00
For the next best,	3,00
For the next best,	2,00
For the next best,	1,00

Committee. Prof. W. S. Clarke, Hon. Edward Dickinson, Amherst; Daniel Field, Leverett; L. N. Granger, Hadley; Alden Green, Sunderland.

ROADSTERS.

For the best Roadster to wagon,	$10,00
For the next best,	6,00
For the next best,	5,00

Committee. C. F. Woods, Enfield; Alvin J. Johnson, Sunderland; Edward P. Hibbard, Hadley; Avery R. Cushman, Amherst; Calvin D. Eaton, Pelham.

EQUESTRIANISM.

For the best display of skill in riding and managing a Horse by a Lady,	$5,00
For the next best,	3,00
For the next best,	1,00

Committee. J. R. Cushman, Joel Packard, Wm. Conkey.

TRIAL OF SPEED.

One Hundred Dollars will be given in Premiums in this Department.

REPORTS.

For the best Report of the Chairman of any Examining Committee, upon the Exhibition assigned him, said Report to be published in the Transactions of the Society, . $10,00

For the next best, 5,00

COMMITTEE ON REPORTS AND CROPS.

Committee. Austin Eastman, E. F. Cook, O. Watson, Rev. John Jones, Charles H. Field, Levi P. Warner, L. V. B. Cook, Royal M. Montague, M. N. Spear.

EXPERIMENTS.

For the most thorough and reliable experiment on the application of manures, entries to which were made previous to June 15th, 1866 and premium to be paid in November, 1869.

1st premium, $25,00

2d premium, 15,00

In addition to the above offers, the Massachusetts Society for the Promotion of Agriculture will pay three premiums of $100,00 each for the same experiments.

Persons desirous of competing for these premiums must enter their names upon the Secretary's book previous to June 30, 1866, and obtain from him printed directions respecting the manner of performing the experiments.

PREMIUMS OFFERED LAST YEAR.

PASTURE LANDS.

For the best experiments in reclaiming or improving worn out lands so as to increase their value for pasturage, commencing in 1866, and continuing three years, entries to be made before June 15, '66, $10,00
For the next best, 6,00

UNDER-DRAINING LANDS.

For the best conducting experiment in thorough drainage, by means of covered drains of tile or stone, upon not less than one acre, with not less than forty rods of drain to the acre, $20,00

Entries for the above experiment must be made with the Secretary on or before August 1, 1866, and the premium will be paid in November, 1867. The competitors must give a written statement of the character of the soil and subsoil, the method and expense of drainage, and the effect upon the crop of 1867.

CROPS.

For the best conducted experiments in raising Indian Corn, Broom Corn, Wheat, Rye, Oats, Barley, Onions, Potatoes, Carrots, Mangle Wurtzel, and Winter Squashes. Entries to be made with the Secretary, on or before July 1, 1866.

1st premium, Solon Robinson's Agriculture
2d premium, $3,00

CRANBERRIES.

For the best conducted experiment in raising cranberries on not less than ten rods of land, with written statement.

1st premium, $5,00
2d premium, 3,00

ARBORICULTURE.

FOREST TREES.

For the best plantation of not less than five hundred oak or other forest trees, suitable for ship timber, planted by the competitor.

1st premium, $10,00
2d premium, Harris on Insects.

ORCHARDS.

For the best orchard of not less than thirty apple or pear trees in one lot, regard being had to their form, vigor and variety.

1st premium, $3,00
2d premium, 2,00

PEAR TREES.

For the best thirty pear trees set out during the year 1866, and in good condition, Sept. 15, 1867.

1st premium, $3,00
2d premium, 2,00

APPLE TREES.

For the best thirty apple trees set out in 1866, and in good condition Sept. 1st, 1867.

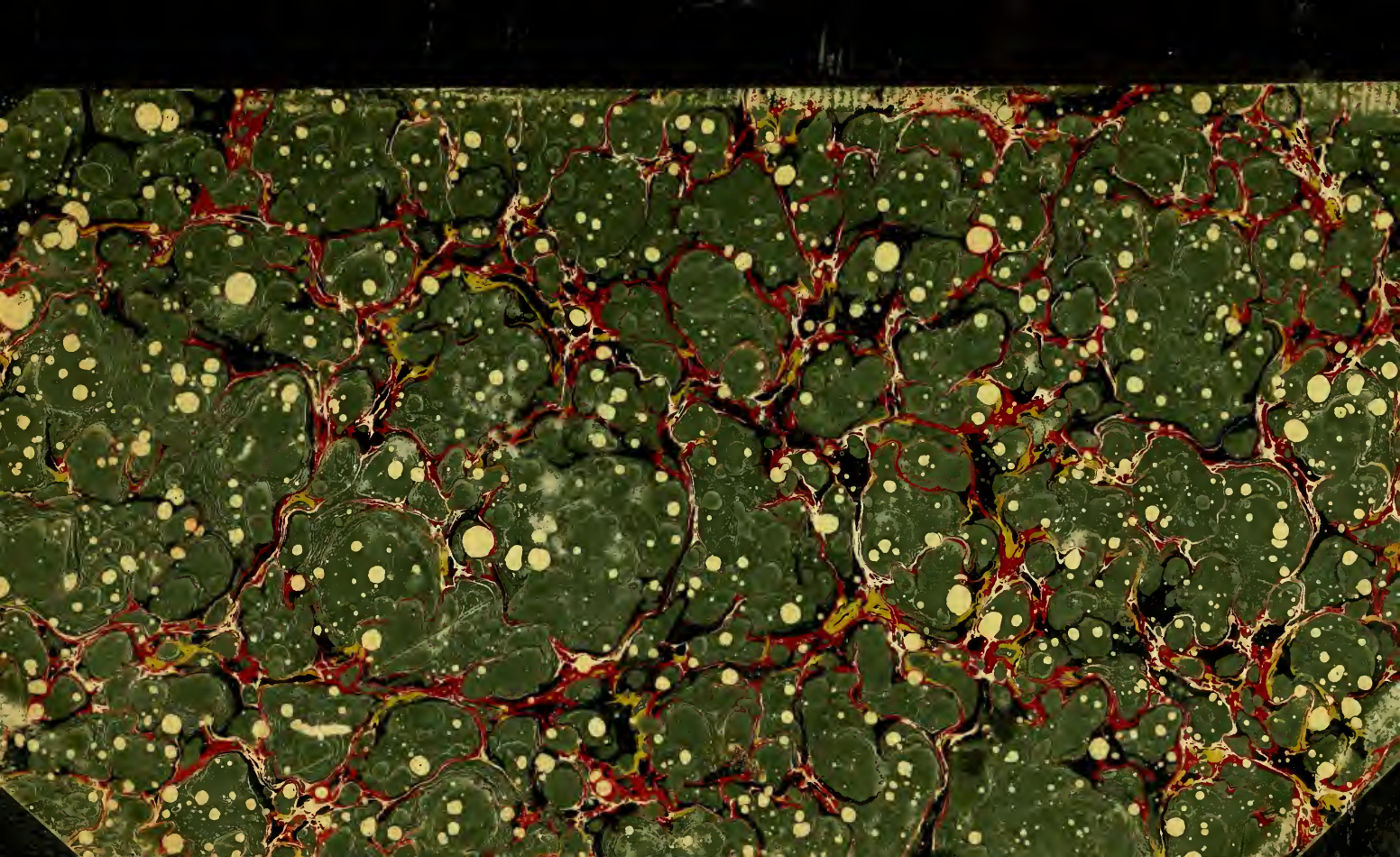
1st premium, $3,00
2d premium, 2,00

PEACH TREES.

For the best thirty peach trees set out during the spring of 1866, and in good condition, Sept. 1, 1867.

1st premium, $5,00
2d premium, 3,00

GRAPE CULTURE.

For the best experiment in growing grapes, on not less than ¼ of an acre of ground; entries to be made on or before July 15, 1866. Premiums awarded in 1867. Statements to be made in writing of the soil, manner of planting, and crop of 1867.

1st premium,	$10,00
2d premium,	5,00